THE HEALTH-CARE OF THE BABY

The Literary Digest

Parents' League Series

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The Health-Care of the Baby

By LOUIS FISCHER, M.D.

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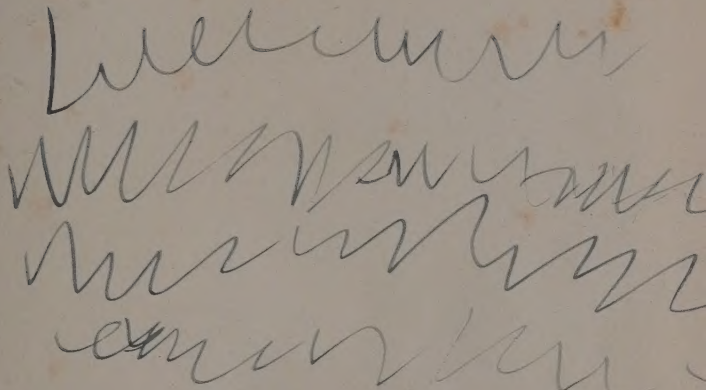

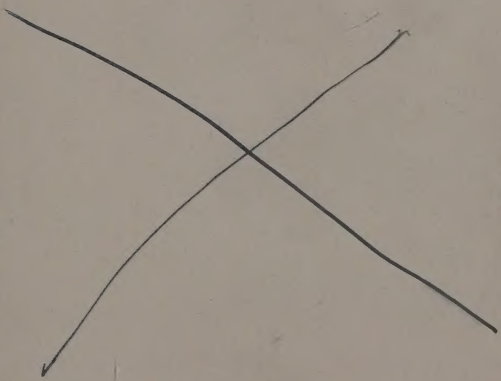

CORRECT METHOD OF HOLDING AND FEEDING A BABY

THE HEALTH-CARE OF THE BABY

A HANDBOOK

FOR

MOTHERS AND NURSES

BY

LOUIS FISCHER, M.D.

Author of "The Health-care of the Growing Child"; "Infant Feeding in Health and Disease"; "A Text-book on Diseases of Infancy and Childhood"; Attending Physician to the Willard Parker and Riverside Hospitals; Chief Attending Pediatrist to the Zion Hospital of Brooklyn; Medical Director of The Infantorium; Former Instructor in Diseases of Children at the New York Post Graduate Medical School and Hospital; etc., etc.

ONE HUNDRED AND TWENTY-FOURTH THOUSAND

ELEVENTH EDITION, REVISED

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To

MY WIFE

THIS BOOK IS

MOST AFFECTIONATELY

DEDICATED

PREFACE TO TENTH EDITION

THE first edition of this work appeared in 1906, eight succeeding editions having been issued in ten years. An increasing demand having called for a tenth edition, I have concluded, after consultation with the publishers, to rewrite and improve most of the chapters, and to add new material. The consequence is that this tenth edition is new in more than the ordinary sense, the matter having been extensively revised, and the type entirely reset.

In the study of an infant we find, broadly speaking, that there are four important steps which will aid in development. They can be designated: a, b, c, and d. A, airing; b, bathing; c, clothing; and d, dieting. These four factors must harmonize or blend so that one helps the other. To intelligently discuss the same and give advice to the mother or nurse anxious to know *how, when,* and *what* to feed,

and the proper method of bathing, airing, and clothing to protect, and at the same time, to harden the infant, are the objects sought in this volume.

One of the most important chapters deals with feeding. The home preparation of modified milk is given for the average healthy infant. For the infant who seems dissatisfied with the formula usually required for one of its age—special rules are given for increasing the formula. The feeding for a premature or an unusually delicate infant is given, likewise the feeding for a dyspeptic infant as well as feeding during a diarrheal period is described.

The feeding of a premature or underweight baby is always a difficult problem. A new article on dry milk feeding is added, also a general guide for the management of an incubator baby.

The intelligent supervision of the acute infectious diseases such as scarlet fever, diphtheria, whooping-cough is described. While no mother or nurse is expected to supervise the treatment of a pneumonia or take the responsibility of supervising an infantile paraly-

sis, many guiding points which the mother or nurse should know are outlined. The significance of catarrh of the nose and throat, and its association with enlarged tonsils and adenoids, forms an important chapter in this book. The frequency of ear trouble as an adjunct to nasal and throat infection is described.

Many practical chapters will be found that are intended as first aid in fever, in injuries, in accidents, and in emergencies—what the mother or nurse should know, and especially what she should do, until the physician can be reached.

The problem of training an infant, especially during its first year, requires good judgment. We should know when an infant is really sick, and when he is being spoiled. The correction of bad habits is one of the most difficult duties of the mother. Especial attention has been given to the nervous system, and advice given which will aid in correcting faults and weaknesses. To spank a sick child is a crime, still this is done daily by unthinking mothers and nurses who do not recognize the presence of illness.

The selection of a nurse-maid is of the ut-

most importance, and unless she has been trained in a hospital, she should familiarize herself with modern sanitary measures. Such details are emphasized in this book. I would call particular attention to the instructions regarding ventilation and the value of the sleeping porch for hardening, or in the treatment of respiratory diseases.

LOUIS FISCHER.

33 West 73rd St., New York,
October 1920.

PREFACE TO FIRST EDITION

THERE are many details pertaining to ventilation, clothing, and bathing which every mother and nurse should know and which she should have in a condensed manual. The physican can not always be at hand to answer the many details which the modern mother requires, most especially if she is out of town or if she is traveling. Suggestions and advice for infant feeding in health, and when the stomach and bowels are out of order, form the most important part of this little work. Directions for the management of fever, and a guide during such diseases as measles, croup, skin diseases, etc., are given. In cases of accidents, poisoning, etc., I have given ample advice to be followed until medical help can be procured. The correction of bad habits, and the management of rashes have received careful consideration. Let me

hope that the book will serve as a companion to the young mother and nurse for whose instruction it is intended. I desire to acknowledge my indebtedness to Alice Haehnlen, R.N., for many valuable suggestions.

New York, February, 1906.

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PART I

General Hygiene of the Infant

CHAPTER I

THE NURSERY

IF possible the nursery should be a large room having plenty of fresh air and sunlight. Everything in the nursery should be washable; the walls, if possible, should be painted instead of papered; the furniture should have no upholstering; the floor should be of hardwood, or closely boarded and covered with a few rugs that may be cleaned with a damp cloth.

Dusting

A feather duster should never be allowed in the room. The ideal method in dusting is to use a vacuum cleaner. Floors, walls, furniture and rugs can be properly cleaned with one. If this means of cleaning can not be employed, nothing should be allowed in the room that can not be dusted with a damp cloth. The screens should be covered with material that may be easily washed.

Regulating the Light

The windows should have no other hangings than oil shades, of which there should be a green one and a white one at each window to regulate the light, which should be neither

dull nor glaring. At night, to insure proper repose there should be no light. With the modern convenience of electricity, a small green glass bulb can be used when a light is necessary. A wax candle will answer for all purposes at night if electric light can not be used.

The Bed

A brass or iron bed without any hangings should be selected. The bed should be one having a good woven wire mattress; it is no matter if the knobs and scrolls are not fancy. On top of this wire mattress place a heavy blanket folded so as to fit the bed, or a hair mattress. (I prefer a blanket, as this can be unfolded and aired daily, and occasionally washed.)

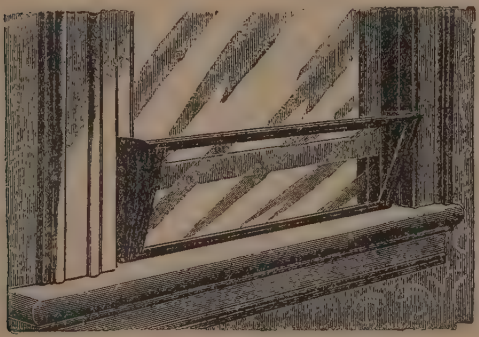
Cover the mattress first with a rubber sheet, second a cotton sheet, third a quilted pad. On this pad the baby is laid and covered first with a cotton sheet, second with light-weight wool blankets and as many as are required for the temperature of the room. Down comforters may take the place of blankets, as they are much lighter in weight.

The pillow should be filled with hair, never with feathers or down, and should never be more than one inch high.

Airing the Bed

The blankets or comforters should be hung on the line for a good airing every few days. The bed should not be made as soon as the

baby is taken up in the morning, but the bed-clothes should be spread apart daily until thoroughly aired. Sheets or pads that have once been wet must be changed for fresh ones. Never put the baby in a cold bed, but see that the sheets are warmed by means of hot-water bags before the baby is placed there.



IDEAL WINDOW VENTILATOR

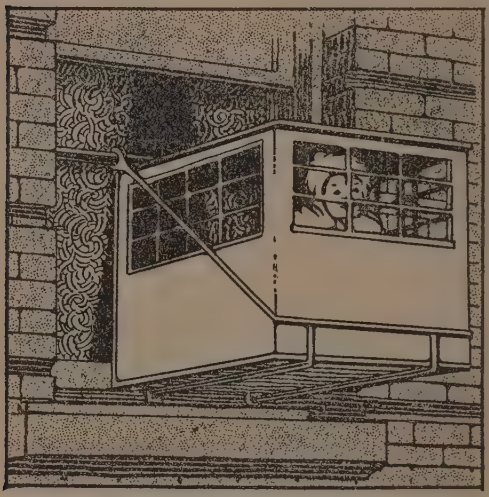
Made by Ideal Ventilator Co., 120 Liberty St., New York City.

This is a glass ventilator which can be adapted to fit any window. Air currents are diverted upward and so do not occasion draughts. It is especially adapted for ventilating the sick room where plenty of fresh air is required.

Ventilating the Nursery

Fresh air is of almost as much importance to the baby as food. That the giving of fresh air to the baby is sadly neglected for fear of "taking cold," can be seen in every-day life among the majority of people with whom we

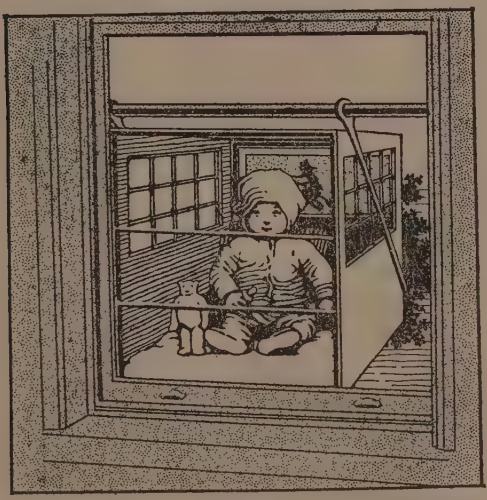
are brought in contact. A baby confined to a room with hot air is far more liable to catch cold when taken out of doors than one accustomed to be in a room having fresh, cool air. The nursery should be thoroughly ven-



BOGGINS' OPEN-AIR SLEEPING COMPARTMENT
View from the street.

tilated at least twice a day. This can easily be done while the baby is taken out into the street or into another room. Fresh air should be admitted to the nursery from windows communicating with the street or yard. Air-

shaft ventilation must never be permitted. If the nursery has an open fireplace fresh air can be admitted constantly. A window-board or window-box may be used to admit air. This window-board is a strip of wood five



BOGGINS' OPEN-AIR SLEEPING COMPARTMENT
View from the room.

inches high and the width of the window. The lower sash is raised and the board inserted. This makes a space between the two window sashes through which the air can gradually enter the room.

Night Air

Night air is fresh air and should be admitted to the nursery. Children deprived of fresh air at night are more sensitive and hence contract cold in the head and "sniffles" more readily when taken out of doors. At night the nursery can be ventilated by having a window open in an adjoining room, or if the weather is not too cold, the window furthest from the baby's bed may be left open, and the screen properly placed to avoid any possible draught. Give the baby plenty of breathing room by placing the screen away from the bed, not against the bed, as frequently seen.

Boggins' Window-Crib

A convenient outdoor sleeping compartment readily attached to any window can be bought under the name of "Boggins' Window Crib." *

This outdoor crib is admirably adapted for city apartments. It is thirty-six inches long, twenty-four inches wide and twenty-seven inches high. The illustration shows how comfortable the baby can be in this crib, and how he can be kept in view of his mother or nurse. The metal roof is insulated, so that the compartment is always cool in summer. The reinforced screens make it absolutely safe. The baby can not fall out, and flies or mosquitoes can not get in. A folding carriage is also made so that, on cool days, the baby can be wrapt

* Southall, Trublood & Co., 320 Broadway, New York.

and placed in the carriage and the carriage rolled into the crib.

Heating the Nursery

Most of our city houses and apartments are heated by means of a hot-air furnace or with steam heat. The best method of heating is by means of an open fire. Gas stoves should never be used in the nursery. If additional heat is necessary during the bath, an oil stove should be used.

The Temperature

During the day the temperature of the nursery should be between 65° and 70° F., never more. During the night it should never be over 65° F., and gradually reduced so that when the baby is about one year old it will not be over 60° F.

The Nurse-Maid

The selection of a nurse-maid is a very important matter. It is important because the infant lives with the nurse and usually sleeps in the same room. The nurse feeds, dresses and bathes her. She is consequently associated with her almost as much as, if not more than, the mother.

Every infant should sleep alone. While the nurse or maid may sleep in the same room she must not be permitted to take the infant into her bed. Leucorrhœal discharges from a nurse can be transmitted to the infant from infected bedclothes, and give rise to infection resulting in leucorrhœal discharge, or catarrh of the eyes.

Do not select a nurse who suffers with catarrh or throat trouble. It is important to see whether her tonsils are enlarged, for a sufferer from chronic tonsillitis can easily infect the infant. We should know that her lungs are normal, that she has no chronic cough, and no evidence of tuberculosis. A skin disease or eruption should always be looked upon with suspicion, it may be an innocent rash or it may be syphilis. Her teeth and gums should be examined. If pus exists at the roots of her teeth, a mouth infection can be transmitted to the infant by an innocent kiss. A health certificate from a physician should be requested.

If possible select a nurse who has been trained in a hospital devoted to the care of infants. She should be a woman between twenty and forty years of age, one that is quiet, mild-mannered, and that does not "know everything." Experimental feeding, as frequently tried by the nurse, is responsible for more rickets and weak children than any other method of rearing children. The nurse-maid should wear a dress or uniform that may frequently be washed. She must take orders from the physician and mother. It is the mother's place to instruct the nurse-maid. A mother who is dependent on a nurse will find that fact to be a detriment to her child. The nurse-maid should be instructed to wash her

hands in soap and water after handling soiled napkins. It is absolutely essential that she scrub her hands in soap and water, and brush her finger-nails before touching the feeding bottles, and handling the nipples. The neglect to do this may be the means of carrying germs or particles from the napkin to the nipple and thus contaminating the food, or giving baby a sore mouth.

Toys

In selecting toys for the baby those made of ivory or rubber are to be preferred. Select the best quality of pure rubber and avoid those whose colors rub off. Avoid all "woolly lambs" and "woolly dogs," as the baby is sure to get some of the fluff into his mouth, which will cause gastric disturbance. Wooden blocks that can be washed, not those covered with paper, should be given to the baby.

CHAPTER II

BATHING AND CARE OF THE NAVEL

BATHING

The First Bath

THE first bath given to the baby should be an oil or vaselin bath. Soon after the baby is born the body should be anointed with warm olive oil or warmed vaselin. This oil can be applied with a large cotton wad. By this means we can remove the cheesy covering, called vernix caseosa, with which the baby is born. The oil bath serves the double purpose of cleansing the skin and lubricating the body so that the chilling of the body is prevented. An oil bath should be given daily until the navel cord has dried and fallen off. This usually happens between the fourth and eighth days. The first tub bath may now be given. *Requisites for the Tub Bath are:* A warm room, temperature 70–72° F.; papier-maché bath-tub on a low table; a basin of fresh warm water; two soft sponges or wash cloths; two large soft towels; a bath thermometer with wooden case; olive oil soap or superfatted soap; a powder shaker containing

The Tub Bath

pure talcum powder; several toothpicks on which a little absorbent cotton is twisted; a soft brush and fine comb; a large flannel bathing apron.

Temperature of Bath and Room

When giving the baby a bath, see that the temperature of the room is between 70–72° F. Place the tub where there is no possibility of a draught, or avoid draughts by means of screens. Never place the tub on the floor, but always on a low stand or table. For a very young infant have the temperature of the bath between 98–100° F. As the baby grows older, gradually lower the temperature so that when baby is one year old the temperature is between 85–90° F. Always use a bath thermometer, never guess at the temperature, as the water will feel very much warmer to the sensitive skin of the baby than to a hand accustomed to hot water.

How to Give the Bath

After everything is prepared for the bath, and the fresh clothing for the baby is warmed, tie on the large flannel bathing apron. Undress the baby and take him on your lap. Cover all but his head with the flannel apron. After bathing the face with the fresh water from the basin, soap the cloth and carefully wash the head and scalp. Dry the face and head thoroughly. The entire body is now carefully bathed with soap and warm water from the basin. Keep the baby wrapt in the flannel apron as

much as possible while this is being done. Now lift him gently into the fresh warm water in the bath-tub. Use a fresh cloth and thoroughly rinse off all soap. After remaining in the tub for two or three minutes he should be lifted out of the tub and placed on the warm towels which have been prepared on the bed. Wrap the towel around him and gently pat him dry. Use the second towel to dry all the little folds of flesh, under the arms, at the neck, between the thighs, etc. Lift the baby from the damp towel on to a dry blanket, rub him with alcohol, and dust a little talcum powder on the neck, behind the ears, under the arms and knees, in the groin and on the buttocks. Wipe away the superfluous powder as it will only irritate the skin, especially in the groin where it is likely to get wet and cake.

Drying

Powdering

As baby grows older he may remain in his bath longer—from five to ten minutes, especially during the summer. After the morning bath he should receive a dash of cold water over his spine. This had better be given by means of a large sponge saturated in cold water. While the baby is still seated or standing in the bath water, this saturated sponge should be held back of his head, the water squeezed out and allowed to run down his back. By the use of cold we contract the blood-vessels and prevent chilling of the sur-

Cold Spray or Hardening

face. This plan is most admirably adapted for hardening the baby, thus preventing him from taking cold easily.

The Foreskin

If the baby is a boy the foreskin should be pushed back every day and the parts carefully washed with cotton and warm water, removing all white particles collected there. At times the use of borated vaselin is necessary. When it is impossible to push the foreskin backward and clean the parts, then pieces of smegma may cause the trouble and it will be necessary for the physician to force the foreskin backward to remove the smegma. When this is impossible circumcision will be necessary.

The Scalp (Milk-Crust)

The scalp need only be washed two or three times a week, unless it is covered with greasy scales (milk crust) as is quite common; then it should be washed every day and anointed with melted cocoa butter. If these greasy scales persist, the physician should be consulted. Be very careful when washing the scalp or removing these scales, as the fontanel or "soft spot" on the top of the head is open. Do not rub over this spot roughly or allow anything to fall on it or strike it.

The Nose and Ears

After baby is drest his nose and ears should be cleaned by means of wooden toothpicks on which a little absorbent cotton is twisted, care being taken to see that the end

is well covered. Dip the covered end of one of these toothpicks into a solution of boric acid and insert into the nose; by gently moving it around the nostril remove as much of the secretion as possible. Clean the ears in the same manner, but use a freshly mounted toothpick for each ear and nostril.

Boric-Acid Solution

Boric acid solution for the baby's toilet is made by adding a teaspoonful of boric acid powder to a pint of boiling water, or can be bought from the druggist by asking for a 2 per cent. solution of boric acid.

The Mouth

Baby should receive daily washings of his mouth by giving him a drink of water after each feeding. The old method of cleansing the mouth with a solution of boric acid on cotton or gauze frequently causes ulceration. The lining of the mouth is so delicate that the slightest friction may cause inflammation.

The Teeth

When the teeth are present they should be kept clean. Neglect of the teeth will result in caries and foul breath; particles of milk sometimes remain between the teeth, turn acid, and so destroy the enamel of the teeth. Baby's teeth are best cleaned by means of a small piece of cotton dipt in a weak solution of bicarbonate of soda and water. The teeth of older children may be cleaned with a brush and a teacup of warm water to which half a teaspoon of table salt has been added.

The Eyes

To cleanse the eye dip a small pledget of cotton into a 2 per cent. boric acid solution. Hold this cotton near the eye and squeeze the cotton, letting a little of the solution fall on the eyelid. Let it remain for a few moments; do not attempt to open the eye as the solution will trickle there itself; wipe, but do not rub, the eye gently toward the nose with a dry piece of cotton, using a fresh piece of cotton for each eye.

The Nails and Hair

If it is necessary to shorten the nails they should be cut, not bitten off, before the baby is bathed. After the bath any remaining foreign matter under the nails may be removed with a wet toothpick.

The hair should be brushed with a soft camel's-hair brush.

When to Bathe

It is well to give the bath just before putting the baby to bed and before the evening feeding. It makes him sleep better and there is no danger of his catching cold by being carried about. Never give a bath directly after a meal or just before the baby is to be taken out. In the morning one hour after his feeding he may have a sponge bath. During the summer months the baby may have a tub bath (one minute dip) in the morning in addition to his evening tub bath. There are four channels by which impurities can be removed from the body; they are: 1. The skin; 2. The kidneys; 3. The intestines; 4. The lungs.

To remove impurities through the skin, the pores must be kept open. This can only be attained by bathing. Besides cleansing the skin the bath exerts a very soothing influence on the nerves. Very nervous children will appear more calm after a bath, so that children who are restless at night will be strengthened and soothed by this simple means.

Sensitive or Chafed Skin

If the baby's skin shows a tendency to be red and chafed then it is advisable to use no soap at all, but an ordinary bath or an oatmeal bath made in the following manner will be found advantageous:

Oatmeal Bath

Tie one pound of oatmeal into a bag made of cheese-cloth. Place this bag in the baby's bath-tub; let it soak in hot water for about one half hour, and then add enough water to bathe the baby. The duration of the bath should be from five to ten minutes; the temperature of bath 95° F.

When to Stop Bathing

Do not bathe the baby if he has an eczema or a very reddened skin. (Read also the article on Eczema on page 147.) Do not bathe him if an eruption is present, unless the eruption is due to an irritant applied to the skin. Turpentine, mustard, and camphorated oil, when rubbed into the skin, will cause an eruption resembling scarlet fever. Under such conditions the bath may be used. When fever develops the bath may be continued, provided

there is no eruptive disease like measles or scarlet fever. When baby has a cough or catarrhal manifestations, it is advisable to discontinue the bath for a few days.

CARE OF THE NAVEL

The nurse in charge of the baby must thoroughly wash her hands and clean her nails before touching the cord.

At Birth

Dry dressing only should be used. The cord should be dusted with aristol powder and wrapt in several thicknesses of sterilized cheese-cloth. A clean dressing should be renewed daily until the cord falls off.

After the Cord Falls Off

Sprinkle talcum powder into the navel and cover it with several layers of cheese-cloth or linen, over which apply the bellyband.

Sore Navel

If proper cleanliness has not been observed inflammation of the navel will result. If such is the case, the skin surrounding the navel will appear reddened and an oozing or discharge of pus follows. The physician's attention must be directed to this condition, the neglect of which may result in blood-poisoning.

Rupture of the Navel

When baby strains very hard to have a movement of the bowels a rupture of the navel sometimes follows. This protruding mass feels soft, and a distinct gurgling sound can be heard when it is replaced or pushed back by the finger. Straining during constipation

or straining during continued diarrhea may cause this condition. Violent coughing spells such as occur in whooping-cough may also cause this rupture. A snug-fitting abdominal binder evenly placed will support the abdomen and hold this rupture in place. It is best to consult the physician the moment the rupture is noticed. Until then a strip of zinc oxide adhesive plaster 1½ inches in width should be tightly drawn around the body covering the rupture.

CHAPTER III

CLOTHING

THE new-born baby requires the following clothing: During the day, a flannel band; a diaper; socks; a long-sleeved shirt; a flannel pinning blanket; a white dress. At night, a flannel band; a long-sleeved shirt; a diaper; a flannel night-dress.

The Flannel Band

The flannel band should be long enough to reach twice around the baby's body and should never be more than four inches in width. It will interfere with the breathing if brought up too high. It should have no seams or hems to cause uneven pressure, as it must fit snug, but not too tight. This band should always be closed on the left side; whenever possible it should be closed by basting with needle and thread. If the baby is restless and this can not always be done, then it may be fastened by using four of the smallest size safety pins.

The Knit Band

This flannel band should usually be discarded after the baby reaches the age of three months. When this band is discarded, a lisle

or knit silk and wool band should be used in its place. This band is held in position by means of shoulder straps and diaper tag.

The Diaper

The diaper should be made of soft bird's eye cotton or linen. For a very young baby it should be made about eighteen inches square and folded but once. Knitted or stockinette diapers are light, porous and elastic and yield to all strains and motions of the body; they can be bought in the stores. I especially recommend them for children after they are placed in the sitting position.

Never place a small, folded diaper inside of the regular diaper; this would cause too much thickness between the baby's legs, and may cause the legs to assume a bowed appearance, especially if the bones are soft and bend easily. The baby should never have more than two thicknesses of cloth between his legs. To protect the skirts from the excess of urine, a quilted diaper pad about twelve inches square can be laid directly under the baby after he is diapered, and the skirts then arranged over this pad. This pad should never be tied by means of strings around the baby's waist as is so often seen, as this brings the weight on the hips. By careful handling the pad will remain in position when the baby is taken in arms. Never resort to a rubber diaper, for sanitary reasons.

Quilted Diaper Pad

The diaper once wet must never be dried and used again, for unless the baby is perfectly normal the urine may contain substances which will irritate the buttocks and thighs, thus causing redness and chafing. At times eczema will result from constant irritation. When there is redness and irritation of the buttocks, or genitals, do not use soda or strong soap in washing the diapers, use only olive oil or castile soap, and no bluing, dry in the open air and sun, never in or near the nursery.

Paper Diapers

Paper diapers recommended for traveling are made by the Lehigh Paper Mills, of New York. This diaper paper is extremely soft, and is manufactured under sanitary conditions which exclude everything that might chafe or irritate the baby's skin. When a diaper is soiled it can be thrown away; it will not clog the plumbing. It is placed inside of a regular diaper, thus preventing the cotton fabric from becoming soiled.

The Shirt

Over the band a lisle or light-weight silk and wool shirt is worn in summer, a second weight silk and wool shirt in spring and fall, and a third or heavier weight in winter. The fourth or very heavy weight shirt found in our stores should never be used in our climate. Silk and wool shirts should be used because they are light in weight and wash well. Woolen materials shrink and become hard in washing. A

combination of silk and wool, no matter how often washed, remains soft, retains its original size and shape and gives freedom with every motion of the baby's body.

Pinning Blanket

Next comes the pinning blanket. This is always made of light-weight flannel, and made after the regular skirt pattern, only that it is left open in the back the full length of the skirt, thus making it more convenient in handling the baby, changing the diaper, etc. This pinning blanket may also be modeled after the popular "Gertrude" pattern. After the pinning blanket is closed, the skirt part is folded, and turned up at the bottom and pinned with several safety pins, so as to reach just above the hem of the dress. This will keep the cool air from the baby's feet and at the same time give him plenty of room to kick or move his limbs.

Flannel Skirt

When baby is put into short clothes, about the age of five months, a short flannel skirt, on a flannel body in winter, on a cotton body in summer, takes the place of the pinning blanket. Over the flannel petticoat mothers usually insist on putting a white petticoat because it "looks better." This is not necessary and only adds more weight to the baby's clothes.

The Dress

The dress, skirts, and band are slipt over the infant's feet, never over its head. On

cold days the baby should wear a dress of flannel or a flannel or cashmere sack over the white dress. The baby's clothes should be made plain, avoiding all ruffles, plaiting, and useless trimmings; allow only enough fulness for comfort; select fine, soft materials, and when trimming is considered indispensable, use laces instead of embroideries.

Wrappers and Blankets

It is advisable to have several light woolen wrappers which can be quickly slipt on the baby whenever necessary. Knitted wool blankets are more serviceable than the bought woolen blankets for wrapping baby, as they are light in weight and can be more easily washed, more quickly dried and remain softer than the woven blankets.

Socks and Shoes

The feet should be covered with very closely knitted silk and wool socks. When the clothes are shortened soft moccasins or kid shoes and merino or silk and wool stockings take the place of the woolen socks or bootees.

Ankle Support

When the baby is able to stand on his feet and shows signs of taking the first steps, a shoe with a flat, broad sole should be made to fit the individual child's foot as accurately as possible. An inside ankle support should be fitted into the shoe. Another shoe that answers the same purpose is made with whalebones fitted at the sides. Laced shoes are

preferred to buttoned ones as they can be made to fit the foot better.

Drooling Bib

During the teething period, or when the baby begins to "drool" much, he is apt quickly to wet through any little bib he may wear, and so take cold by having damp clothing next to his skin. A water-proof bib must be worn. Rubber is objectionable on account of its warmth and odor. Several water-proof materials of light weight are now on the market. Any of these can be used. A piece cut the shape of the bib can be bound with tape and worn underneath the linen bib to prevent the clothing from becoming wet. The Lehigh Paper Mills, of New York, make sanitary paper bibs which can be used while traveling to protect the dresses. They cost less than a cent a piece and can be thrown away.

When to Shorten the Clothes

The baby's clothes should be shortened when he begins to kick or show signs of wanting to use his limbs—this is about the fifth month. It is not wise to make this change during cold weather. If the baby is born in July it is better to shorten the clothes in October, the beginning of the fourth month, rather than wait until November and make the change during very cold weather.

Position of Baby While Being Drest

The baby should always be drest while lying on his back on a soft bed or a pillow. Very little or no turning of the baby is neces-

sary. The band, as said before, may be slipt over the feet, the body gently raised by grasping the feet, the arms slipt through the shoulder straps and the band then slips into place without turning the baby. The skirts and dress are laid together and slipt over the legs at the same time; after the sleeves are gently worked over the arms the baby is turned on the right side and the skirts and dress are closed. If a sack is required the left arm can be slipt into the sleeve while the baby is still on the right side; one more turning of the baby to the left side will permit the right arm to be slipt into the right sleeve.

When Comfortably Drest

When the baby has on the right amount of clothing his limbs will be pink or the skin mottled. They should not be bluish, as they usually are when the baby is not drest warm enough. In special cases, where, for example, heart disease exists, continued blueness of the limbs is found. Such cases require careful medical supervision.

When too Warmly Drest

When the baby is too warmly drest perspiration will result. This has a weakening effect, besides producing a sensitive skin, which means less resistance and a liability to take cold easily.

Night Clothing

A baby under twelve months is put to bed with a shirt, a diaper, and a flannel or flannelette nightdress, which is made long enough to

allow the hem to be gathered on a drawing-string. This will insure the baby's feet being covered even tho the outer covering be kicked off.

After the baby discards the diaper at night, night-drawers, which will be found more serviceable and comfortable, may be worn. These can be made of canton flannel or can be bought made of stockinette.

Street Clothing

When the baby goes out of doors he needs, in addition to the regular house clothes, a long woolen or wool-lined coat with shoulder cape as an extra protection; a silk cap with heavy lining; woolen mittens; a lace veil (bobbinet), which may be worn on very windy days or when asleep in the carriage. A woolen veil should never be worn, as there is danger of the baby swallowing some of the fluff. After the baby is in short clothes leggins will be necessary in cold weather. During the summer a piqué coat and a thin lace cap are all that is necessary.

CHAPTER IV

DEVELOPMENT AND GROWTH

Height

THE average height of the new-born male is from 19½ to 20 inches (about 50 centimeters); of the female from 19¼ to 19¾ inches (about 48.5 centimeters). A child grows most rapidly during its first year. The increase during the first year is 5 to 6½ inches; second year, 2½ to 3½ inches; third year, 2⅓ to 2⅔ inches; fourth year, about 2 inches; fifth to sixteenth year annual increase from 1½ to 2 inches; sixteenth to seventeenth year, 1½ inches; seventeenth to twentieth year, 1 inch yearly.

The Hair

The growth of hair seen on the baby's head at birth usually falls out during the first three or four weeks of life, and then a new growth gradually takes its place. This hair is light in color, but usually becomes darker as the baby grows older.

Intelligence

During the second month the baby shows signs of intelligence. This is the time when the mother and nurse think it necessary to entertain the baby, but this gives more pleas-

ure to the mother than to the baby, whose nervous system is very delicate. The brain is very active during the first year of life and therefore requires rest and quiet. During the third and fourth months the baby learns to hold up his head if his back is supported. He will learn to recognize his mother and he begins to smile and "coo." The first tears are usually seen during the third month. During the fourth month the baby begins to notice his toys. The salivary glands become active and drooling begins. During the sixth month he tries to sit up unsupported. This should not be encouraged or allowed until the seventh month and then only for a few moments at a time. During the seventh or eighth month the first tooth usually appears.

Walking

Diseases of the bones, rickets, and scrofula retard growth. A child should begin to walk at the end of twelve months. If a child when beginning to walk uses chiefly its toes and has a limping gait, more especially if symptoms of pain be noticed in one knee, and tenderness be caused by handling the limb, the physician should be consulted. During the ninth and tenth months the baby attempts to lift himself up on his feet, and during the tenth and eleventh months he is able to stand with assistance. The first attempts at walking are generally made during the twelfth month, and

at fourteen or fifteen months the baby as a rule is able to walk very well alone. The baby should never be encouraged to walk; he will walk of his own accord when his muscles and bones are strong enough to support him.

Talking

He begins to talk about the twelfth month, his first words usually being Mamma and Papa. The center of speech may be inactive and show no signs of development until the end of the second year. If the child is otherwise healthy, no alarm need be felt at this state of affairs. If, however, the child is backward in its physical development, as well as its mental development, then treatment must be sought to remedy this condition.

Loss of Speech

If an infant showing proper development begins to speak, and for no apparent reason then stops speaking, the cause of the condition should be carefully investigated. A child suffering from a severe infectious disease, like diphtheria, may during convalescence, develop paralysis, which might cause the sudden cessation of speech. The neglect of treatment at such a time may result in permanent injury to the child.

The Fontanel

The fontanel or "soft spot" in the baby's head should be completely closed by the end of the eighteenth month.

The Weight

The baby should be weighed at regular intervals. Nothing else tells so accurately

whether or no he is thriving. For the first year the baby should be weighed every week, during the second year, every two or four weeks will be sufficient. The best time to weigh the baby is when he is undrest, just before his bath.

How to Weigh

He should be weighed in the same scales each time. The scales must be accurate. Scoop scales are best adapted for young infants. When weighing the baby undress him, and wrap him in a small blanket and place him in the scoop of the scales; balance the scales and note the amount; then remove the baby and after dressing him, weigh the blanket in which he was wrapt; deduct the weight of the blanket from the total and the remainder will be the weight of the baby.

Normal Gain

The average healthy baby weighs from seven to seven and one-half pounds at birth. A few ounces are generally lost during the first week. These are made up during the second week and then the baby should gain at the rate of four to eight ounces each week up to the sixth month. The gain from the sixth to the twelfth month is less, usually from two to four ounces a week.

A healthy baby properly fed does not lose in weight. There are times when the baby will gain very slightly and probably for a few weeks not at all, and still be in a healthy con-

WEIGHT AND FEEDING RECORD

AGE	Weight Pounds Ounces	Gain+ Loss— Ounces	Food	Stool
week				
weeks				
weeks				
weeks				
weeks				
weeks				
weeks				
weeks				
weeks				
weeks				
weeks				
weeks				
weeks				

WEIGHT AND FEEDING RECORD

AGE	Weight Pounds Ounces	Gain+ Loss— Ounces	Food	Stool
14 weeks				
15 weeks				
16 weeks				
17 weeks				
18 weeks				
19 weeks				
20 weeks				
21 weeks				
22 weeks				
23 weeks				
24 weeks				
25 weeks				
26 weeks				

WEIGHT AND FEEDING RECORD

AGE	Weight Pounds Ounces	Gain+ Loss— Ounces	Food	Stool
27 weeks				
28 weeks				
29 weeks				
30 weeks				
31 weeks				
32 weeks				
33 weeks				
34 weeks				
35 weeks				
36 weeks				
37 weeks				
38 weeks				
39 weeks				

WEIGHT AND FEEDING RECORD

AGE	Weight Pounds Ounces	Gain+ Loss— Ounces	Food	Stool
40 weeks				
41 weeks				
42 weeks				
43 weeks				
44 weeks				
45 weeks				
46 weeks				
47 weeks				
48 weeks				
49 weeks				
50 weeks				
51 weeks				
52 weeks				

dition. During the teething period and during very hot weather the baby as a rule gains very little in weight.

RECORD OF A HEALTHY BABY, BREAST FED

Age	*Weight Pounds*
Weight at birth	7½
Weight at 1 month	9
Weight at 2 months	11¼
Weight at 3 months	12½
Weight at 4 months	13¾
Weight at 5 months	15
Weight at 6 months	16¼
Weight at 8 months	18¼
Weight at 10 months	19¾
Weight at end of 1 year	21
Weight at 1 year, 3 months	22
Weight at 1 year, 6 months	22½
Weight at 1 year 9 months	24
Weight at end of 2 years	26

Some babies fed on prepared infant foods or those foods containing a great deal of starch, will gain rapidly in weight.

A normal baby usually doubles its weight at the end of the fifth month, and by the end of the first year weighs three times its weight at birth. Taking seven pounds as the average weight for an infant at birth, it should weigh fourteen pounds at the end of the fifth month and twenty-one pounds at the end of the first year.

If an infant is under weight, or dyspeptic,

or if he suffers from intestinal trouble, it may be necessary to weigh him every day for several weeks until we are sure a regular and systematic gain is being made. If the infant is breast fed and we suspect scanty milk, the weight should be taken before and after the nursing. The difference in the weight will show the number of ounces of milk the infant has taken.

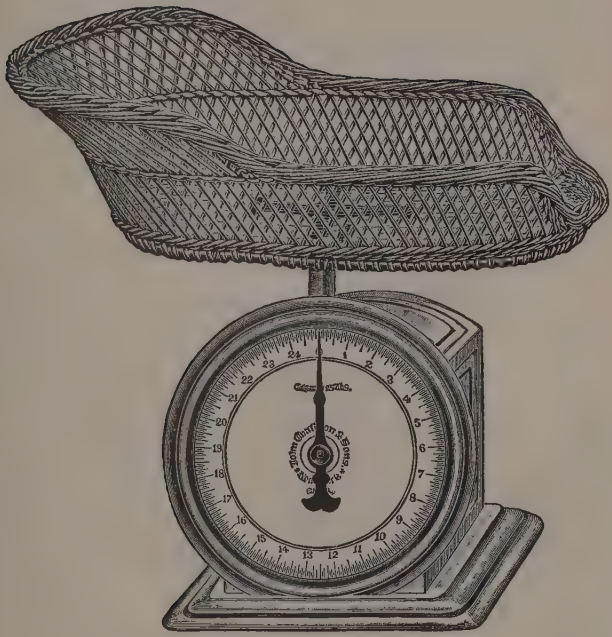
Kicking for Exercise

For the first two weeks of life the baby takes very little physical exercise, but after this he begins to kick and move his arms around in a manner which insures plenty of it. His clothing should be loose enough to permit him to use his arms and legs freely. He gets exercise while in his bath, kicking his legs and moving his arms. A cool sponge bath of the body chills the surface and causes the baby to draw long breaths; this expands the lungs and is the best form of pulmonary gymnastics. When the baby cries from temper let him alone—his lungs are exercised by crying.

When carrying the baby change him from one arm to the other so that he may learn to use and exercise both arms equally.

Creeping

When the baby is six months old place him on a large, clean rug and permit him to roll and creep at will. This exercise requires no regulation except precautions against dangerous places.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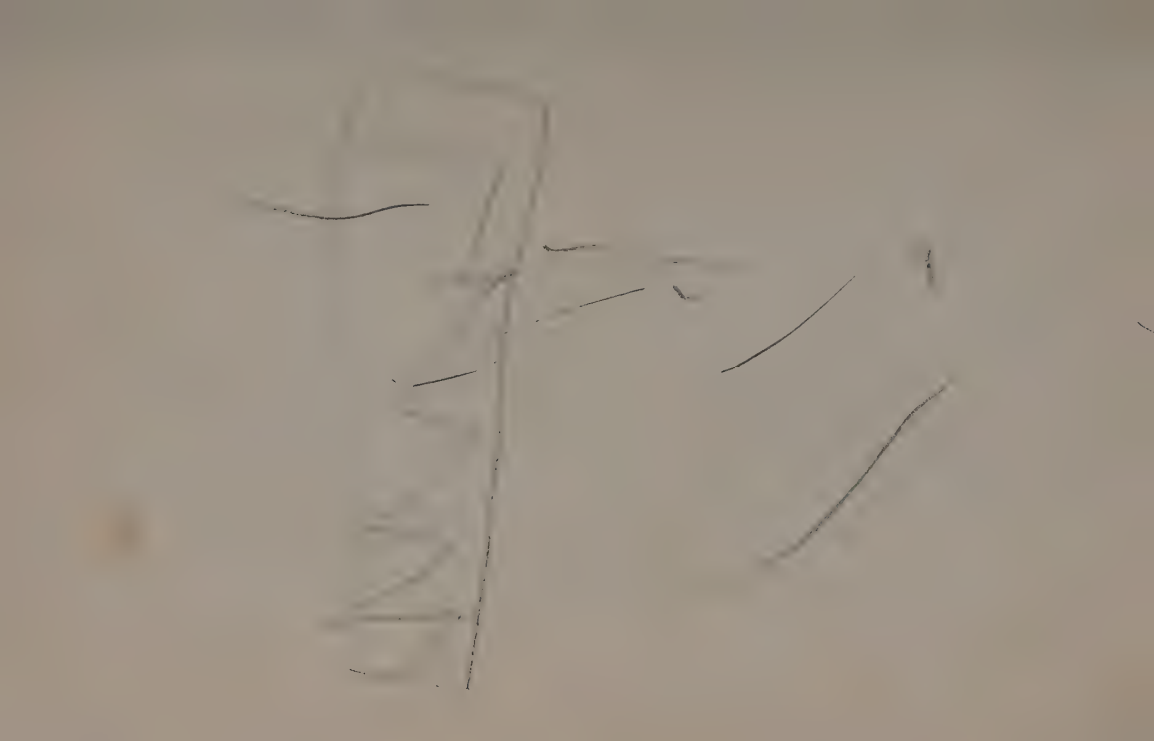


Walking

Do not put the baby on his feet. When he can pull himself up on his feet by his own effort, it will be time to encourage him to make the effort to stand and walk. Later on, walking will be the best outdoor exercise.

The First Outing

If the baby is born in summer and perfectly normal, he should be given his first outing when eight or ten days old. If born in winter he must be gradually accustomed to outdoor life. This is best done by dressing him in cap and coat in addition to his house clothes and placing him in his carriage in the nursery. Open the windows from the top, close all doors so there is no draught and wheel the baby back and forth for an hour or more. This method of giving fresh air can also be employed when the baby is older and the streets are wet or when very sharp winds are blowing. When the baby is two months old, he may be taken out in dry, cold weather. Begin by letting him stay out for an hour or two in the warmest part of the day. Gradually increase the length of time from week to week until the baby is accustomed to outdoor air, when he can remain for several hours at a time each nice, dry day. In summer the baby may remain outdoors until 7 o'clock, and in the winter until 5 o'clock if the air is clear and dry.

Outdoor Life

In summer the baby should be taken into

the house or in the shade during the hottest part of the day, from 12 noon to 3 P. M.

The Carriage

Select a carriage that is strongly built, that has good springs, wheels with rubber tires, and a top that can be made to fit tightly about the head of the carriage. This top is especially valuable in winter, as it keeps off all winds. Separate tops of linen can be bought for use during the summer. These tops, whenever possible, should be lined in green, as this color is the least trying to the baby's eyes. In winter the carriage should contain a hair pillow covering the bottom of the carriage and another small, flat hair pillow for the baby's head. Over the pillow should be placed a knit wool blanket. The baby should be placed on this blanket which then should be carefully wrapt around him. Another wool blanket or afghan should be placed over the baby and tucked well in at the sides and foot of the carriage. Over this a fur robe should be placed in very cold weather. In summer cotton covers take the place of the wool blankets. When the baby is still very young it is better for the nurse to stay on one block so as to avoid jars at crossings or curbs. When it is necessary to take the carriage over curbs, the hind wheels should be gently let down first. This avoids that sudden forward jar of the baby and leaves him in a comfortable position.

As the baby grows older and is able to sit up, or about the ninth month, the seats which are bought with the carriage may be used and arranged so as to give him the proper position.

Feeding in the Carriage

The best place to feed the baby is in the house, altho I frequently permit a baby to be fed, in the carriage, out of doors during the summer.

Sleeping in the Carriage

There is no objection to the baby's sleeping when in the street. There is no more danger of his taking cold while asleep than when awake. We invariably find those children who sleep out of doors less prone to take cold. See that baby is drest warm and placed in the sunshine with his face and eyes protected from the sun and wind, and he will sleep with comfort and advantage.

CRYING

A certain amount of crying is necessary for the baby if he is to be healthy and strong, for this is the way he exercises his lungs and sends the blood to the extremities.

Normal Cry

This normal cry is loud and strong and baby may indulge in it frequently; even tho he gets red in the face this cry is healthful. A careful and observing mother will soon learn to know this cry from the cry of pain, hunger or discomfort.

Causes

The baby may cry because he is hungry, or

thirsty; his napkin may be wet; he may be frightened or sleepy; his clothing may be uncomfortable; he may be tired lying in one position, or he may be crying from temper and want to be indulged.

When the baby cries see that he is comfortable, that the napkin is not wet, that the hands and feet are warm, that the clothes are smooth under him, that no pins are pricking him, and change his position.

Due to Colic

If he is crying from colic the cry is strong, sharp, and spasmodic and often accompanied by a drawing up of the legs and a contraction of the features.

Due to Earache

The cry from earache is a continuous whine and often the hand is brought toward the head.

Due to Hunger

The cry of hunger is a continuous, fretful sound, heard soon after feeding or some time before the next meal is due, and is usually accompanied by the sucking of the thumb or fingers.

Due to Illness

When the baby is very ill or weak the cry will be low or moaning.

Due to Temper

The cry of temper is loud and strong and is accompanied by kicking and stiffening of the body. It can easily be distinguished from other cries, for when baby gets what he wants he immediately stops. This cry of temper should never be given in to or the mother will

regret it later on. The training can not begin too early. When the baby cries from fright he should be taken up and comforted and as soon as quieted put back on his bed again.

When the baby cries and all causes but temper have been eliminated, then let him "cry it out," even if he cries an hour. The second struggle will not last so long. The third will be still shorter. If the abdominal band is properly applied no rupture can result from this crying.

Habitual Crying

In cases of habitual crying it is better to get the opinion of a physician as to the cause before subjecting the baby to too rigid discipline.

CHAPTER V

PROPER TRAINING

Resting

FROM earliest infancy it is advisable to train the baby. He should be given the breast, and after nursing or feeding from the bottle, be laid in his bed. If this habit is begun early a regular habit of resting can be formed.

The Bowels

When baby is three months old he can be taught to use the commode. He should be placed on a small chamber held in the nurse's lap. As he grows older and strong enough to support his back he may be placed on his chair or commode. The best time to have baby's bowels move is in the evening before his bath or evening feeding. As baby grows older his bowels will move with less effort after his feeding, but this should not be encouraged while he is young, as he is liable to regurgitate his food. If baby makes no attempt to move his bowels when placed on the commode, then a small soap stick, or a gluten or glycerin suppository, should be inserted into the rectum. By this means we direct the

baby's attention to the reason of his being placed on the vessel. Such treatment may be repeated daily for weeks or until baby's bowels move unaided.

Sanitary Nursery Seat

Each child should have his own vessel or his own seat as a sanitary measure. These sanitary wooden seats can be bought at any of the large department stores of New York City. They can be laid on any vessel and prevent the child's body from coming in contact with the vessel. As they are small in size they are adapted for the young infant as well as the older child.

The Queen Manufacturing Co., of Chicago, Illinois, makes a seat that clamps on any ordinary toilet seat. The opening is six by seven inches. It is finished in smooth white enamel. The back for supporting the child is adjustable, so that the seat can be carried in a suitcase when traveling. A strap buckles across the front.

The Bladder (Urine)

What is possible with the bowels can be accomplished with the bladder. If the mother or nurse will place the infant on a vessel every three or four hours he will gradually learn to hold his urine until such time. He should be placed on the vessel immediately on awakening, be it night or day. Children invariably empty the bladder on awakening.

Normal Movements

At birth, the baby may normally have from

three to four movements in twenty-four hours. As he grows older one or two movements a day will be sufficient. While the baby is fed on a milk diet his stool should be yellowish in color, smeary or paste-like in consistency, and the smell should be acid, but not disagreeable. As soon as an exclusive diet is changed to a mixed diet, the stools lose the yellow color and become darker, and resemble more those of an adult, tho remaining softer and thinner throughout infancy.

Mucus

Mucus is always present in all healthy stools, but is so well mixed that it does not appear as mucus to the naked eye. Any appearance, therefore, of mucus easily visible should be regarded as abnormal.

Abnormal Movements

Abnormal stools requiring treatment are these: Greenish stools resembling spinach; greenish stools containing small, white particles; brownish stools having a very offensive odor; thin, brownish stools resembling muddy water, passed with considerable flatus (gas); dry, white or light gray stools; stools with jelly-like masses or long shreds of mucus; stools passed in hard, dry balls; stools mixed with blood.

The Nervous System

To develop an infant's brain the nervous system requires quiet but cheerful surroundings. Useless excitement is harmful. To take the baby and handle him like a toy is wrong.

I have seen infants taken up from a sound sleep to display the "talent" that some one has taught them. Nothing is more harmful than to have the mother compel her infant to display various tricks during its feeding. While this is a gratification to the friends, it certainly is detrimental to the infant's brain and nervous system.

Sleep

A new-born baby sleeps about nine-tenths of the time. The sleeping time gradually diminishes and when the baby is five months old he usually sleeps all night and requires a long nap of two or three hours in the morning, and another of about one hour in the afternoon. The healthy baby sleeps with his mouth closed, the nostrils can be seen dilating gently and the chest moving slightly and regularly. The baby should never perspire while sleeping, but the skin should remain warm.

The baby should be put to bed while awake. He should first be fed, made comfortable and the room should be darkened. He should neither be rocked nor sung to sleep; if left to himself he will soon learn to fall asleep quietly. He should be put to bed no later than six o'clock, and should continue his afternoon nap until four years old or longer.

Disturbed Sleep

Disturbed sleep or sleeplessness is usually caused by improper feeding, and in the bottle-fed infant by over-feeding or too frequent

feeding. Intestinal indigestion and colic are the most frequent causes. Discover the cause and remove the disturbance yourself if possible; failing to do so consult a physician, as the trouble may be due to large tonsils, adenoids, spine or hip disease, chronic joint pains, earache or toothache. See that the baby's feet are warm. Do not give him too much clothing. Do not excite him with a new toy or romping play, and do not arouse fear before putting him to bed. Do not use soothing sirups or other medicines.

Bad Habits

When the baby is put to sleep his hands must always be outside of the blanket or bed clothing. Bad habits are easily acquired, especially so if the genital parts are unclean. Any itching may cause a desire to scratch, later on, this may lead to constant fumbling, and if this latter is not corrected we may find that our baby is addicted to one of the worst habits found in infants or children—namely, masturbation.

The Pacifier

The pacifier is used by mothers and nurses who do not realize its unsanitary nature. The friction during the sucking act causes the mouth, gums, and tongue to become so irritated that disease germs penetrate, resulting in a mouth disease called thrush or sprue.

CHAPTER VI

VACCINATION

TO prevent a child from taking smallpox it should be vaccinated. All infants over two months old may be vaccinated. If smallpox exists in a locality or if an infant has been exposed, he should be vaccinated immediately.

When possible, this should be done during the spring or fall, but the time of the year does not in any way influence the result. Nor is there any danger from vaccinating during the winter or summer.

While many physicians vaccinate on the arm, many more choose the lower (outer) third of the leg. It matters little which part of the leg is chosen so long as the virus is absorbed. When an inflammatory reaction takes place, immunity (protection) results.

No mother or nurse should attempt to vaccinate a baby; a physician should always be called. With care and cleanliness there is little or no danger of complication; on the other hand if the slightest amount of dirt from a finger-nail or any other contamination is

introduced into the wound, a child may contract erysipelas, which may lead to blood-poisoning and death. Five to seven days after vaccination, inflammation or redness around the vaccinated area will be noticed. This is the natural course "of taking." If this redness spreads and the skin is swollen and tense the physician will usually prescribe a cool, moist dressing of lead water or a 1 per cent. boric acid solution. The reddened surface is to be covered with gauze moistened with one of these solutions until the inflammation subsides; this usually takes two or three days more, in all about ten days.

CHAPTER VII

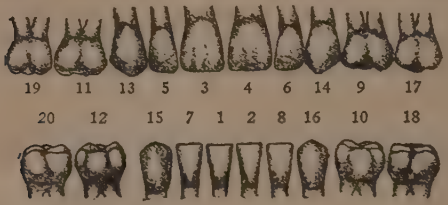
DENTITION (TEETHING)

WHEN the baby is about four months old the flow of saliva usually begins, or is very much increased, so that a bib must be provided. This drooling or "slobbering," as it is familiarly called, is not a sign that the teeth are trying to push their way through the gums, but simply signalizes the development of the salivary glands. Drooling

The infant's first set of teeth are called the temporary teeth. The first tooth of the second or permanent set begins to appear about the sixth year. It is located behind the last temporary grinder and is often mistaken for a temporary tooth.

Many mothers and nurses dread the teething period, and regard it as the time when the baby is likely to be sick. This is a mistake. It is perfectly natural for the baby to have teeth and there is nothing whatsoever to fear. In a normal baby the teeth appear between the seventh and tenth months.

There are twenty temporary teeth. The following table will show the usual rule followed by normal dentition in the average baby:



1 and 2 are the lower incisors, usually first teeth; then follow 3 and 4, the upper incisors. Normal children usually teeth in pairs and not singly, whereas infants suffering with rickets usually have an eruption of single teeth. As a rule there is a lapse of from three to twelve weeks between the appearance of each group. Some infants do not show teeth before the end of the first year. This is usually due to deficient nourishment. The physician should be consulted for a change of diet. Infants reared by bottle-feeding do not cut teeth as early as those nourished by breast-milk, altho infants suffering with rickets sometimes teeth very early.

Swollen Gums

The restlessness, loss of appetite, slight fever and putting of fingers in the mouth so frequently attributed to teething, are more often due to insufficient nourishment. When the gums are very red and swollen and baby

seems really to suffer, consult your physician who will probably order a suitable mouth wash.

Before considering lancing of gums consult an up-to-date dentist. A piece of ice wrapt in sterile cheese-cloth may be held on the gums, or absorbent cotton may be saturated with five drops of paregoric and gently rubbed on the gums. In order to relieve this condition frequent sips of cool water are comforting if the gums are hot. Biting on a hard substance such as a piece of zwieback, which is preferable to the rubber or ivory ring so commonly used, is soothing. A weaker food is advised if the baby's vitality seems lowered during the teething period, which is shown by fever, restlessness, undigested food in the stools, or vomiting. If the baby is breast-fed give him one or two ounces of filtered water before each feeding and reduce the length of nursing to five minutes. If bottle-fed take from each bottle one or two ounces of milk and replace with the same amount of filtered water. When all signs of restlessness have disappeared return to the former feeding.

Delayed Teething

Delayed teething is due to insufficient phosphates and vitamines in the food. Cereals such as cornmeal, farina, hominy, arrowroot, and strained vegetables, chiefly spinach, beet-tops, and green peas, also strained orange

juice, should be given at least once a day. When the infant is backward in teething there is a deficiency in the bone-forming elements of the food. As a rule it shows deficiency in phosphates or an absence of vitamine and protein elements in the food. This deficiency can be supplied by giving phosphorus made from cereals. This is sold in tablet form under the name of "vitaphos." * One tablet given three times a day will supply the phosphorus necessary for the stimulation of the growth and development of the teeth.

* The General Drug Co., 94 North Moore Street, New York.

PART II

Feeding

CHAPTER I

NATURAL METHOD OF FEEDING

THE natural method of feeding a baby is by means of the human breast. If this were not so then every woman would simply pass through her period of pregnancy and the breasts would not secrete milk. Breast milk contains in addition to nourishment certain antitoxic bodies. These substances usually prevent a child from taking the acute infectious diseases. To produce this immunity from disease is in itself sufficient compensation for the arduous duties demanded of a nursing mother. Breast Feeding

Recent studies with human milk have shown that the greatest number of infants owe their dyspepsia, with its train of symptoms such as colic, flatulence, eructations and vomiting to overfeeding.

This overfeeding is due to too frequent intervals of feeding. Whereas the old rule of feeding every two hours has been used, experience has demonstrated that it is wiser to Overfeeding

substitute an interval of at least three to four hours, and so give no more than six, rarely seven feedings in 24 hours.* We also gain thereby an interval of rest for the mother which seems to relieve her of the overstrain by too frequent nursing.

There are times when the breast milk is deficient in quantity. At such times we should always make use of what little breast milk is present and supply the deficiency by giving the bottle.

WATER

Every child, young or old, must receive water several times a day. It will aid materially in clearing the mouth and gums and in quenching thirst. An infant up to the first month should receive several teaspoonfuls of plain filtered water either immediately after nursing or feeding, or as soon after feeding as possible. It is not necessary to awaken the child in order to give it a drink. If it is not time for feeding and the infant is restless, a few spoonfuls of cool water will frequently quiet it. When we desire to modify constipation, then water will be a most important factor, especially so when large, cheesy curds are found in the stool.

The average child of eighteen months should

* See Feeding Schedule, page 57.

take between sixteen and twenty-four ounces of water in twenty-four hours. In warm weather when the child perspires freely more will be necessary. Sips of water may be taken with the meals, but the best time to drink water is after meals, or between meals, not immediately before or when beginning a meal when it will interfere with digestion.

CHAPTER II

BREAST FEEDING—WET NURSING

THE first three or four days after birth require special feeding methods:

The first substance secreted in the breasts is known as colostrum. This is thinner than milk and very scant. The exhaustion of the mother requires long intervals of rest, therefore she should not be disturbed more than once in six hours during the first three days to nurse her baby. If, however, the supply of milk is ample then we can follow the table on page 57 and feed the baby every three to four hours.

Interval During Day

During the first month the baby should be fed every three hours during the day, never oftener; and during the second month the same interval should be maintained. The baby may be taken from his sleep during the day to be nursed.

Interval During Night

Do not disturb the baby from his sleep at night to be nursed. Let him rest as long as

From Birth to 3 Months old.	3 to 8 Months Old.*	8 Months Until 1 Year Old.
6 A.M.	6 A.M.	6 A.M.
9 A.M.	9:30 A.M.	10 A.M.
12 Noon	1 P.M.	2 P.M.
3 P.M.	4:30 P.M.	6 P.M.
6 P.M.	8 P.M.	10 P.M.
9 P.M.	12 Midnight.	
12 Midnight.		

he appears satisfied. This applies to healthy infants only. In sickness special feeding rules are required. If the baby thrives and gains in weight, it is better for both mother and baby to have an interval of rest and skip a nursing or two after midnight. If the baby is restless during this interval, change his position and give him one or two teaspoonfuls of water.

How to Hold the Baby While Nursing (See Illustration Frontispiece)

The mother or wet-nurse should always sit upright while nursing the baby, be it night or during the day. If the baby is nursing from the left breast, he should be held on the left arm while the right hand presses the breast away from the baby's nose, but without pulling the nipple from his mouth. This will give

* The breast-fed infant requires the same addition of fruit and vegetable juices as are given to the bottle-fed infant. (See pages 92 and 93.)

him plenty of air to breathe so that he must not let go of the nipple to breathe. When there is nasal obstruction such as catarrh, or when post-nasal obstruction exists, such as adenoids, then an infant will let go of the nipple in order to draw a breath.

Length of Nursing Act

No infant should nurse longer than twenty minutes, whereas frequently ten or fifteen minutes will suffice. Do not allow the baby to fall asleep while nursing. If this is allowed he will not get all the nourishment he should have. Light taps on the cheek of the baby will waken him, or the withdrawal of the nipple from his mouth will frequently arouse him to continue nursing. If, however, he will not renew his nursing, and has already nursed ten minutes, then the sleep should not be disturbed.

Do not allow him to take his meal too rapidly as he is liable to have an attack of hiccup or to regurgitate his food. If the baby nurses too rapidly withdraw the nipple from his mouth for a few seconds. This may be done every three or four minutes.

As a rule the baby should nurse from but one breast at each meal; if, however, there is not enough milk in one breast, then both breasts may be given.

Wet Nursing

All American mothers can not nurse their infants. A sick mother, a tuberculous mother,

or a very nervous mother is frequently prevented from nursing her baby through her systematic weakness. In some instances human milk may be necessary to save the life of a weak infant or one that has been improperly managed. A wet-nurse can be secured and it is in many cases a life-saving substitute. A wet-nurse should never be selected without the supervision of a physician. Her blood must always be tested for syphilis before permitting the baby at her breast. Likewise, the wet-nurse should be protected from contracting syphilis; so that the baby to be wet-nursed * should have its blood examined for syphilis. The large majority of American mothers resort to the usual method of artificial feeding by using cows' milk adapted for the age and requirements of the infant's digestion.

Diet of a Nursing Woman

A nursing woman should have three meals a day. These meals should be simple but nutritious and mostly liquid. Meat should be taken only once a day. Milk, eggs, cereals, vegetables, and soups should form the principal part of the diet. Vegetables should be taken twice a day. The following are best for the nursing woman: Peas, beans, baked potato, beets and beet greens, carrots, fresh stewed

* This is a requirement of the New York Board of Health. In this manner we protect both the infant to be nursed and the wet-nurse herself.

corn and spinach. The spinach may be creamed or combined with egg. All varieties of fish are nutritious,—creamed halibut, creamed cod fish, fresh mackerel, bluefish or flounder. For thirst, cool, filtered water or alkaline waters, like seltzer or apollinaris, should be taken.

Scanty Milk

If the milk is scanty, the flow can be stimulated by drinking a cup of hot broth, weak tea, cocoa, milk or gruel several minutes before putting baby to the breast.

Foods Prohibited

Foods to be avoided by a nursing woman, are: Onions, garlic, cabbage, ethereal oils and sour fruits.

Menstruation

The return of menstruation is no contra-indication to the continuation of nursing. In nearly all cases the quality of milk will be affected to such a degree as to cause slight disturbance of digestion, such as restlessness or colic, or some bowel derangement. If the baby continues to gain in weight nursing may be continued. If there is too much disturbance, diluted cows' milk should be given during the first two or three days of menstruation.

SUBSTITUTE FEEDING WHEN MOTHER IS OUT OR ASLEEP

When a nursing mother has lost considerable sleep and is physically exhausted we can not expect a good milk supply. Under such circumstances the physician should be con-

sulted to give the baby a substitute feeding, so that the mother can have a few nights of sleep. The following formula is adapted as a substitute feeding for an infant less than one month old:

Evaporated milk (Peerless brand)
1 teaspoon
Hot water ..... 2½ ounces
Granulated sugar..... ½ teaspoon

Dissolve the cream and sugar in the hot water. Heat to feeding temperature, but do not steam nor boil it. Feed the above quantity every four hours during the night to relieve the mother of the nursing strain.

CHAPTER III

WEANING

BY weaning a breast-fed baby we mean gradually taking from him the breast milk by which he has been nourished since birth, and giving him cows' milk and other forms of nourishment.

By weaning a bottle-fed baby we mean gradually substituting for all cows' milk other nourishment such as raw eggs, soups, vegetables, fruits, and gruels.

A normal baby is usually weaned between the eighth and tenth months. In some instances it is advisable to begin earlier, for example, when there is a deficiency in the quantity of breast milk owing to the ill health of the mother. Sometimes there are reasons why the baby should be nursed twelve months and longer so that it must always be left to the judgment of the physician when the baby should be weaned.

My rule has been not to wean during the summer months, altho it is imperative to

do so if the infant's mother become pregnant. Weaning should not be attempted suddenly. It is better to commence with the breast in the morning and substitute a bottle for the next feeding. Following this meal we can again nurse the baby at the breast and substitute a bottle for its fourth meal.

6:00 A.M. ..... Breast.
8:30 A.M. ..... Juice of a small orange.
10:00 A.M. ..... Arrowroot pap.*
½ bottle feeding.†
1:30 P.M. ..... Breast.
5:30 P.M. ..... Feed by spoon one piece crusht zwieback moistened with 3 ounces of the bottle formula. Then give remainder of bottle formula.
10:00 to 11:00 P.M. ..... Breast or bottle.

If the above formula constipates, substitute oatmeal gruel for the arrowroot.

Six teaspoons of spinach juice are to be given at 5:00 P.M. If this agrees, after several weeks try strained spinach pulp instead of the spinach juice.

At the age of one year, a slice of toasted wholewheat bread, dipt into chicken broth or steak juice, may be given at noon.

One-half of a baked mealy potato may be given once or twice a week, instead of the arrowroot at 10:00 A.M.

* See Dietary.
† See formula for six months old infant, page 92.

Caution must be taken in making this change of diet, as the slightest error in over-feeding or too frequent feeding will be followed by a severe attack of dyspepsia and the usual gastric disturbances, such as diarrhea and colic.

If baby has been taught from birth to drink water from a bottle there should be no trouble while weaning him in having him drink his milk from the bottle. If it is impossible to make him drink from a bottle feed him from a spoon or let him drink from a cup. Some babies learn to drink from a cup when six or seven months old. It is better to have a strange nurse feed baby while weaning him and keep the mother or wet nurse away so he can not see the breast and be reminded of the breast feeding.

CHAPTER IV

MIXED FEEDING

WHEN the breast-milk is of good quality, but the quantity is deficient, and the baby does not thrive and seems to cry from hunger, it is necessary to give him some additional food. This is usually done by giving baby alternate feedings of breast-milk and cows' milk.

The mother or wet-nurse should try to improve both quality and quantity of her breast-milk by building up her general condition. Frequently a subnormal or anemic condition requires an iron tonic. In other cases a day's outing to the country or seashore, with moderate exercise will stimulate the flow of milk.

Breast Milk and Cows' Milk

As cows' milk is more difficult to digest than breast-milk, it must be given well diluted; therefore, give the baby the amount in the formula provided for a baby who is one month younger. For example: If the baby is four months old when you start the mixed feeding, give him of the formula of cows' milk that a baby three months old would receive and gradually increase until the formula for a baby of his age is given.

CHAPTER V

ARTIFICIAL FEEDING

COWS' MILK

Certified Milk

IN New York and the larger cities the best cows' milk for infant feeding is sold, in quart bottles, under the name of certified, or guaranteed, milk. This certified milk is as near perfection as is possible to-day. Grade A milk also is sold in quart bottles, in the larger cities. When Grade A milk is used, or when milk is procured from a farm or in the country, and is not certified or supervised by a Health Commission, then it is best to boil the milk when preparing the formula. Uncertified milk should never be fed in its raw state owing to the danger of disease germs, especially bovine tuberculosis. Boiling the milk removes such danger.

In summer milk should never be used for infant feeding after it is twenty-four hours old. Even within this length of time, on very hot days, milk will frequently sour. When milk is procured direct from the dairy or farm it should immediately be cooled and kept in cold water, at least one hour before the formula is made up.

Do Not Use Milk from One Cow

Milk varies in its percentage of cream. The average milk contains between 3½ and 4 per cent. of cream, or fat. If milk is procured in the country, or on the farm, we must try to procure a mixed milk, that is, milk taken from several cows, rather than milk from one cow. Milk from one cow varies much more in cream than that taken from a herd. The Jersey and Alderney cows have the richest milk; therefore their milk contains much more fat than that from the ordinary cow.

Whole Milk

When preparing the formula, milk must be well shaken to mix the cream with the milk. Diluted whole milk feedings are adapted for the normal, and the average infant up to about six months of age. If the infant is strong, has good digestion, and can assimilate more fat or cream, then extra cream or top milk may be added.

Milk for the baby's feeding should be kept near the ice in a separate compartment of the refrigerator, or better still a nursery refrigerator, in which nothing but baby's food is kept, should be used.

HOW TO OBTAIN TOP AND FAT-FREE OR SKIMMED MILK

Let a quart of milk stand 4 or 5 hours (or until the cream line is well defined), and then proceed as follows:

TOP MILK

7 Per Cent. Top Milk: Pour off the top half (16 ounces). This contains about 7 per cent. fat.

5 Per Cent. Top Milk: Pour off the top three-quarters (24 oz.). This contains about 5 per cent. fat.

FAT-FREE OR SKIMMED MILK

1 Per Cent Fat (Skimmed Milk): Pour off the top half (16 oz.) and reject this. The remaining 16 ounces contains about 1 per cent. fat.

MILK FOR HOME MODIFICATION

Fresh raw milk is best adapted for home modification, but—it must be fresh. It is important, therefore, to inquire how long it takes to deliver the milk from the dairy to the house. In the larger cities it frequently takes several days before it reaches the consumer. Certified milk is frequently twenty-four to thirty-six hours old when delivered.

Pasteurized Milk

Pasteurization of milk is a makeshift. The milk is pasteurized because it contains too many germs, and these germs are destroyed by the pasteurizing process. The chemical nature of the milk is changed by this prolonged steaming, hence, pasteurization of milk does not aid the digestibility of the food. If pasteurized milk is fed for a short time it may do no harm.

If, however, pasteurized milk feeding is continued for months symptoms of rickets frequently are manifested. When pasteurized milk is fed for many months and we do not supply the vitamine or live factor, which is destroyed by the prolonged heating, now and then scurvy will develop. To avoid the same when using pasteurized milk one must give from 3 to 6 teaspoonfuls of orange juice, even tho the infant is only one month old. Older infants require in addition to orange juice, the juice of fresh boiled vegetables such as spinach, from 3 to 6 teaspoonfuls daily.

SUGAR

There are three kinds of sugar used in infant feeding:

1st. Milk Sugar called Lactose.

2d. Cane Sugar called Granulated Sugar or Sucrose.

3d. Malt Sugar called Maltose.

When constipation exists then milk sugar, or malt sugar should be used. Milk sugar may cause loose bowels when fed for a long time. Infants gain in weight when malt sugar or the malt preparations are given. There are several good malt preparations on the market: in powder form the Mead's Dextri-maltose No. 1; in liquid form Borchardt's malt soup extract, or the neutral maltose made by the

Maltzyme Co., of Brooklyn. If infants vomit then maltose should be replaced by either milk sugar or cane sugar.

Sugar is not only used for sweetening food, but is a very essential element in the growth of the body. The young infant therefore, requires a large quantity of sugar. Sugar exists in the human milk in a larger quantity than all other solids combined.

The healthy infant can digest maltose or malt sugar, 1 teaspoon to each feeding, or from 6 to 7 teaspoonfuls in the daily quantity of food prepared. When constipation exists milk sugar will sometimes be more serviceable altho it is more expensive.

If an infant is backward and we desire to increase its weight and regulate its bowels, the addition of 1 teaspoon of Mellin's food dissolved in the warm milk is nutritious and laxative.

CHAPTER VI

HYGIENIC SUGGESTIONS IN BOTTLE FEEDING

Utensils Required

THE following utensils are required for the modification of milk at home: A two-quart pitcher; funnel (glass or porcelain); one large spoon; one dozen 4-ounce bottles, (later 8-ounce bottles); one dozen anti-colic nipples; one box non-absorbent cotton; one large saucepan (for heating milk); one high saucepan (for warming bottles before feeding); one dairy, or pasteurizing thermometer.

Feeding Bottles

The long, round feeding-bottle is the best of all feeding-bottles. It is smooth on the inside, has no corners or angles, and can be easily cleaned. On the outside the graduated ounces are marked.

Care of the Bottles and Nipples

As soon as baby has emptied the bottle it should be cleaned with a bottle brush in clear hot water, then filled with fresh water and set aside. In the morning before the day's food is prepared all the bottles should be boiled in a solution of baking soda and water, two teaspoonfuls of soda to one quart of

water. The bottles should then be rinsed thoroughly in clear boiled water.

The nipples should be boiled in water for one minute. When not in use they should be wrapt in dry sterile cheese-cloth and placed in a covered jar.

How to Heat Milk

When the source of the milk is unknown and we are not familiar with dairy methods, the safest plan is to heat the milk in a double boiler until the steam rises, and continue heating at this same temperature for fifteen minutes. We can also subject the milk to the steaming process by using a pasteurizer and steaming the milk about fifteen minutes. Milk should never be sterilized or boiled, except while traveling.

Evils of Sterilization

The first evil result noticed while using sterilized milk is that children so fed are constipated. Prolonged use of sterilized milk results in rickets. There are many cases of scurvy that can be traced to a long-continued use of sterilized milk.

BOILED MILK

In boiling milk the cream or curd is so altered that it induces constipation. There are times, however, when milk is procured from unknown dairies and can not be regarded as safe. Under such conditions it may be necessary to boil the same. To offset the con-

stipation, maltose in 1 or 2 teaspoonful doses should be added to each feeding. If constipation persists, then milk of magnesia in 1 teaspoonful doses may be necessary morning and evening, to overcome this condition.

Boiled milk should not be fed for any length of time. If for any reason we use boiled milk in infant feeding, then we must feed fruit juices such as orange and pineapple, or vegetable juice such as spinach to overcome the development of scurvy. These additions to the diet may be begun as early as the second or third month.

CONSTIPATION DUE TO BOILED MILK

Boiling the milk or subjecting it to prolonged steaming as in the process of pasteurization, induces constipation. Lime water has a constipating tendency. To relieve constipation milk sugar in doses of one-half to one level teaspoon may be added to each feeding. Milk should be warmed, not steamed or boiled if the infant is constipated. A teaspoonful of Mellin's food dissolved in raw warmed milk frequently relieves constipation. Mellin's food contains maltose and this has a laxative tendency.

If we are using milk from an unknown dairy and are compelled to steam or boil the milk then one teaspoon of milk sugar or one to two

teaspoonfuls of Mellin's food should be added to each feeding. It may be necessary to add a teaspoonful of milk of magnesia to the evening bottle, to aid the bowels. Horlick's malted milk from 2 to 3 teaspoonfuls dissolved in 6 ounces of hot water, and given every evening has a laxative tendency. If this is not sufficient 1 to 2 teaspoonfuls may be added to each bottle feeding to aid the bowel movements. The addition of 1 teaspoon of cream to the morning and evening feeding is useful in many cases.

CHAPTER VII

FEEDING RULES

EACH baby is a law unto itself, and its individual wants must be studied. One baby will gain on the same mixture on which another will lose weight. The proof of the proper assimilation of food in any and every infant will be the following: An infant must appear satisfied after taking its bottle. There should be no vomiting or severe colicky pains. The bowels must move (unaided) at least once or twice in every twenty-four hours. The stools should be yellowish-white, and medium soft. The infant should sleep from four to eight hours during the night without awakening.

Weight Increase

The weight must be taken regularly once a week. If an infant thrives it should gain from four to eight ounces every week, until the sixth month after which time it should gain from two to four ounces each week. If the weight shows no increase by all means consult your physician that he may give more substantial food.

HOME PREPARATION OF INFANT FOOD

A child in good health, with excellent digestion, and normal stools, may be fed on milk diluted with barley water. If a tendency to constipation exists then oatmeal water instead of barley water should be used. My plan has been to order the milk diluted with barley water on one day, and oatmeal water on the following day. In summer if a tendency to loose bowels is noted, then milk diluted with rice or barley water should be fed.

Stomach Capacity

No set rule can be given for all infants. Each infant's requirements must be studied. The size of the stomach varies in infants. The stomach capacity of one infant may be six ounces at the age of two months, while another equally healthy infant will have a capacity of and be satisfied with four ounces at one feeding. These individual peculiarities must be taken into consideration when estimating the quantity of food for each meal.

We can not feed all infants at the same intervals. What applies to the quantity applies also to the frequency of feeding. One infant will thrive on a meal every three hours, another infant requires a feeding every two hours. Here again it is necessary to study the individual requirement, and be guided by the amount of rest, by the stool, and by the gain

in weight. The tendency of the mother is to overfeed, which is harmful.

An infant weighing ten pounds requires about 15 ounces of milk in twenty-four hours. An infant of fourteen pounds requires 21 ounces per day. About one ounce of sugar is required per day. Special appetites require special amounts.

The incubator, electrically heated is used to supply an additional amount of heat to the new-born baby. In an emergency a clothes basket lined with a blanket, between the folds of which are tucked bottles containing hot water or electrically heated pads, can be used as a substitute. The baby should be rubbed with oil or vaseline, then wrapt in cotton. Bathing must be omitted. The air in the room should be kept pure and fresh, the temperature between 75 and 80 degrees—no warmer. If possible the feeding should be fresh human milk, if such can not be procured, then dry milk or condensed milk and water should be substituted. The Incubator.

Premature babies have no vitality and every mother or nurse should seek the advice of her physician.

CHAPTER VIII

FEEDING A DYSPEPTIC BABY

IF the baby's stool contains curds or greenish masses and if the baby is restless at night and colicky by day, then the following feeding will be advisable: Take of raw milk, 4 ounces; barley water, 4 ounces, and peptogenic milk powder, ½ measure. Heat slowly with constant stirring until it comes to a boil.

If after three days in spite of this peptonizing milk powder being added, curds are still seen in the stool, then stop milk feeding and give: barley water, 4 ounces; lime water, 1 teaspoonful; Dextri-maltose, 1 teaspoonful; white of one raw egg. Feed every three or four hours. In preparing this formula dissolve the maltose in the barley water and add the lime water. At feeding time warm the bottle and add the white of one raw egg and mix by shaking the bottle.

If persistent vomiting and green stools are present, then use from 4 to 6 ounces of sweetened barley. If the bowels are loose as in

summer complaint, and the stools are watery, give 1 teaspoonful of top milk to a teacupful of barley water, boil five minutes and feed when lukewarm.

If diarrhea continues in spite of the above method of feeding, then give of barley water, 6 ounces; lime water, 1 teasponful; baked flour (see page 109), 1 teaspoonful; maltose, 1 teaspoonful. Feed every 4 hours. Mix flour and sugar with the barley water, add lime water, boil five minutes and feed when lukewarm.

When vomiting persists it is advisable to give the stomach absolute rest and still give enough food to sustain life.

CHAPTER IX

FEEDING DURING DIARRHEAL PERIOD

WHEN mucus continues to be present and the stools are thin, then milk in every form must be stopt. It is in this class of cases that even whey will not be tolerated. This form of diarrhea usually occurs in summer when milk has undergone fermentative changes due to the presence of bacteria. As a temporary substitute feeding, intending to correct looseness, I advise the following: Nestlé's food, 1 teaspoonful; rice water, 3 ounces.

Rub up the Nestlé's food powder with a little cold water, add the rice water and heat slowly until it comes to a boil. Do not add sugar or lime-water. The above quantity can be fed every three hours to a baby up to three months of age.

For a child 3 to 6 months of age give every 3½ hours: Nestlé's food, 1½ teaspoonfuls; rice water, 5 ounces. For an infant 6 to 9 months of age give every 4 hours: Nestlé's food, 2 teaspoonfuls; rice water, 7 ounces.

If this form of feeding is carefully prepared and the utensils are properly cleaned, then we must adhere to a proper feeding interval. An infant with loose bowels should be fed once in three hours and fed very slowly. Unless we adhere to the proper feeding interval and give the infant an interval of rest, we can excite diarrhea by too frequent feeding. A sympathetic mother will frequently indulge her baby and feed too frequently, thus stimulating the bowels by too much liquid food. For an infant 6 months old the addition of 1 teaspoonful of Mellin's food to 4 ounces of milk and 4 ounces of barley water boiled three minutes, has served me very well to correct a tendency to very thin stools.

To correct loose, foul-smelling stools containing mucus give a teaspoonful of castor oil; two hours later begin feedings of four to six ounces of skimmed milk, without sugar. To make skimmed milk place a quart bottle of milk in a refrigerator for three hours, then skim off the cream; the remainder, which is the skimmed milk, is to be used.

CHAPTER X

SUBSTITUTE FOODS

FAT-FREE MILK, ALSO KNOWN AS SKIMMED MILK

DURING fever or when vomiting occurs, fat-free milk should be used. During fever the stomach can not digest whole milk. When the stomach is weakened or inflamed, its digestive power is lessened; hence, fat-free or skimmed milk should be given. Skimmed milk is made by removing all the cream which arises to the top of the milk after it has stood on the ice three to four hours. The remainder is known as skimmed milk. It should be made from fresh milk daily, however. When this is impossible, as when traveling, it can be bought prepared, in tins.*

Curds when present in the stool of an infant, if small and round and lentil-shaped are known as fat curds. They are as a rule caused by "fat indigestion" due to the formula containing too much cream or fat. Other curds very large and coarse are usually saponi-

* Borden's Condensed Milk Co., New York.

fied fat, or casein or cheese curds. If improvement is not noted and curds continue to appear in the stool, then a complete change of food must be made.

There may be rare instances in which an infant can not digest milk. We speak of this as a "milk idiosyncrasy." When such is the case stop all milk and substitute barley water to which the white of a raw egg and a pinch of salt is added. This feeding may be repeated every four hours and continued for one week, after which we can try diluted milk with peptogenic powder added.

PEPTOGENIC MILK

To an eight-ounce bottle of raw milk slowly add with constant stirring, one-half measure (screw-cap) of peptogenic powder, heat slowly for ten minutes over a small flame or to a temperature of 115° F.; then cool to feeding temperature. A more rapid method and one preferred by me is as follows: Take of raw milk, 2 ounces; hot water, 2 ounces; peptogenic milk powder, ¼ measure. Dissolve the peptogenic powder in the hot water, add the raw milk, heat to feeding temperature and feed. By this process each bottle is prepared separately. The milk does not acquire a bitter taste and the curd is partially digested, which

is a decided advantage for the weak stomach of an infant.

CONDENSED MILK

Condensed milk sweetened with cane sugar is sold in tins, under the name of Borden's Eagle Brand. It may be used as a substitute food for a short period when there is vomiting or fever. For an infant of three months, dissolve 2 level tablespoonfuls of condensed milk in 12 ounces of hot water and divide into three feedings of 4 ounces each. Feed every three hours. This may be increased by adding 1 teaspoon of condensed milk and ½ ounce water every 7 to 10 days for 1 month. From 4 to 6 teaspoonfuls of orange juice or vegetable juice should be given once daily.

EVAPORATED MILK

Evaporated milk is sold fresh daily, in bulk. The Peerless Brand, sold in tins, is an excellent substitute food.

When evaporated milk is used malt sugar or cane sugar as well as water must be added. This evaporated milk is adapted for infants with weak digestion. It is especially useful during periods of fever. It is useful in summer for delicate infants as it is more easily digested than the regular milk. When infants vomit on their usual milk formula, they will retain evaporated milk diluted with water.

For an infant of three months, 2 level tablespoonfuls of evaporated milk should be mixed with 12 ounces of water and 1 tablespoon of malt sugar or granulated sugar. This is to be steamed five minutes and divided into three feedings of 4 ounces each. Feed every three hours. If there is a tendency to looseness of the bowels then barley or rice water may be used instead of the plain water. If this formula agrees we may add 1 level teaspoonful of the evaporated milk and another half-ounce of water to the above formula every seven to ten days for one month. When using evaporated milk feedings, orange juice and fresh vegetable juices must be given. These should be ordered by the physician.

DRIED MILK

Mammala. Honor Brand

Dried milk is sold in powder form under the name of Mammala. It is made from fresh whole milk by rapid evaporation of the water. It is prepared with the addition of milk sugar and is convenient because it is a powder to be dissolved in warm water, and is then ready for feeding.

Another dry milk is sold in tins under the name of Honor Brand. This is a certified milk evaporated by heat, and contains milk sugar. It is an excellent substitute for cows'

milk and is prepared by adding a tablespoon or more to each ounce of water. To make a 4 ounce feeding add 4 level tablespoonfuls to 4 ounces of warm water and it is ready for feeding.

A Premature Infant

A premature infant requires a very weak formula. When the stomach is irritable and fresh cows milk will not be retained, then an easily digested food containing a low percentage of fat and protein is demanded. Unless we conform to the requirements of this weak stomach, trouble will follow. Dry milk is well adapted for such cases. It is sold in the shops under the name of Dryco. Begin this form of feeding by giving one rounded teaspoonful to one ounce of hot water every hour. Study the effect. If this is retained then one and one-half teaspoonfuls can be given. Gradually increase from day to day, prolonging the interval to one and one half or two hours. If the food is well borne, the infant should be comfortable, have yellowish or greenish-yellow stools, and show an increase in weight. Daily weighing is necessary to determine the value of the food. If after several weeks of dry milk feeding the infant progresses favorably, then one feeding of fresh cows' milk should be substituted for the dry milk.

CHAPTER XI

PROPRIETARY INFANT FOODS

THE market is filled with a large number of patent infant foods. This proves that there is a demand for something in addition to methods of feeding in vogue at the present day. Physicians as a rule condemn the use of these foods and chiefly for the following reasons:

First. Because the laity, except in rare instances, are not competent to feed an infant by following directions on the label of a box of food. No shoe is made that will fit every baby's foot, and no infant food made will agree with and be properly assimilated and digested by every baby. It is a well-known fact that individualism is more demanded in infant feeding than in any other method of treatment. The digestive functions are totally different in various individuals, and so it must be left for the intelligent physician to note the size of the body to be fed, study the infant's wants, note the condition of his digestive

apparatus and, last but not least, the stool must be properly examined. Then and not until then can any one prescribe the kind of food, the amount of food and the feeding interval demanded.

Second. No greater mistake is made than to suppose that because an infant has gained a few ounces and is gaining continuously, he is in absolute good health. When a large amount of starch or transformed starch, such as dextrinized starch, is fed to an infant, or when large quantities of sugar are given, there is usually a notable increase in weight. Bone and muscle, which are formed chiefly by the protein element of food, can not be replaced by the carbohydrate or fat-forming substances. The ambition of many mothers and nurses is to display with pride a big, fat baby and show large gains in weight. To accomplish this, frequently proprietary foods have been added in very large amounts, thus overtaxing the digestive apparatus and ending in dyspeptic or enlarged stomachs.

Advantages of Proprietary Foods

Having pictured the dangers, it is but fair to state that there are very many virtues in these proprietary foods. I advise the use of many of these foods in infants six months old or older, especially for those requiring additional food during the period of dentition. To the formula of milk and barley water previously

given, add one teaspoonful or more of Mellin's food or malt soup to each feeding. When a tendency to constipation exists Mellen's food or malted milk are especially indicated. Horlick's food is a food which, like Nestlé's food, requires no milk, but only the addition of water. If milk is overheated, as it is when subjected to sterilization or prolonged pasteurization, then a decided constipating tendency usually results. To prevent constipation by using these foods, milk or diluted milk should be simply warmed. When milk is boiled, constipation, due to the altered condition of the casein (curd), results.

CHAPTER XII

DIETARY

DIET FOR NEW-BORN INFANTS DURING THE FIRST FOUR WEEKS OF LIFE. (After Julius Hess) Milk—Cane (Granulated) sugar—Water

	1st 48 hours	3—4 day	5—6 day	7—8—9 day	10—11—12 day	13—14 day	3rd week	4th week
MILK (whole) ounces	..	..	..	2	3	4	6	8
MILK (skim) ounces	..	6	8	6	5	4	2	0
SUGAR (cane) drachms	1	1	1	1	2	3	4	5
WATER (boiled) ounces	16	10	8	8	8	8	8	8
FEEDINGS:								
Amount in ounces	1	1	1.5	1.5	1.5-2	2	2	2.5
Number daily	7	7	7	7	7	7	7	7
Interval in hours	3	3	3	3	3	3	3	3

Mix and divide into required number of bottles.
Hours of feeding: 6—9—12—3—6—10—2.

DIET FROM BIRTH TO ONE YEAR
Milk—Dextri-Maltose—Barley Water

At Birth

Fresh raw milk..... 2 ounces
Barley water*..... 16 ounces
Dextri-maltose†.....3 teaspoons‡

Dissolve the maltose in the hot barley water, add the milk and divide into 8 bottles of 2½ ounces each. Feed every three hours.

* For making barley water see page 106.
† Mead's Dextri-maltose No. 1.
‡ Rounded teaspoons. If cane (granulated) sugar is ordered, measure level teaspoons. To measure a level teaspoon fill the spoon and scrape off the top with a knife, leaving it exactly level full. It takes two teaspoons measured in this way to equal one rounded teaspoon.

Gradually increase to:

Ten Days

Fresh raw milk..... 4 ounces
Barley water ..... 16 ounces
Dextri-maltose ..... 4 teaspoons

Divide into 8 bottles of 2½ ounces each. Feed every three hours.

Gradually increase to:

One Month

Fresh raw milk..... 7 ounces
Barley water ..... 20 ounces
Dextri-maltose ..... 5 teaspoons

Divide into 7 bottles of 4 ounces each. Feed every three hours.

If the above formula disagrees and there is vomiting, colic, or curded and slimy stools, give a teaspoonful of castor oil, and try the following formula:

Evaporated milk (Peerless Brand)
2 level teaspoons
Hot water ..... 6 ounces
Granulated sugar ..... 2 level teaspoons

Divide into 2 bottles, feed every three hours. Use three days and if improved, return to cows' milk formula.

Gradually increase to:

Two Months

Fresh raw milk..... 10 ounces
Barley water ..... 19 ounces
Dextri-maltose ..... 6 teaspoons

Divide into 5 bottles of 5 ounces each. Feed every three and one-half to four hours.

At *three months* additional foods may be given as per following schedule:

6 A.M. Bottle.
9 A.M. 1 teaspoon fresh orange or pineapple juice.
10 A.M. Bottle.
2 P.M. Bottle.
5 P.M. 1 teaspoon vegetable juice (cooked spinach, celery, carrots, etc.).
6 P.M. Bottle
10 P.M. Bottle.
2 A.M. Bottle.

Gradually increase to:

Four Months

Fresh raw milk..... 15 ounces
Barley water ..... 14 ounces
Dextri-maltose .....9 teaspoons

Divide into 5 bottles of 6 ounces each.
Feed every four hours.

At *four months* may have two teaspoons of fruit juice at 9 A.M. and 2 teaspoons of vegetable juice at 5 P.M.

At *five months* may have 3 teaspoons of fruit juice at 9 A.M. and 3 teaspoons of vegetable juice at 5 P.M.

Gradually increase to:

Six Months

Fresh raw milk..... 26 ounces
Boiled water ..... 12 ounces
Dextri-maltose .....12 teaspoons

Divide into 5 bottles of 7½ ounces each.
Feed every four hours.

6 A.M. Bottle.
9 A.M. 4 teaspoons fruit juice.
10 A.M. Bottle to which is added 1/3 yolk of a hard-cooked egg.
2 P.M. Bottle and 2 rounded teaspoons of crusht zwieback.
5 P.M. 4 teaspoons vegetable pulp.
6 P.M. Bottle.
10 P.M. Bottle.

At *seven months* may have 5 teaspoons of fruit juice at 9 A.M., 5 teaspoons of vegetable pulp at 5 P.M., ⅓ the yolk of a hard-cooked egg at 10 A.M., 2 rounded teaspoons of crushed zwieback at 2 P.M., and with the 6 P.M. bottle may have 6 level teaspoons of boiled farina or arrowroot pudding.

Gradually increase to:

Nine Months

Fresh raw milk..... 32 ounces
Boiled water ..... 4 ounces
Dextri-maltose ..... 12 teaspoons

Divide into 4 bottles of 9 ounces each. Feed every four hours.

At *nine months* may have 6 teaspoons fruit juice at 9 A.M. One-half the yolk of a hard-cooked egg at 10 A.M., 4 teaspoons of crusht

zwieback at 2 P.M., 6 teaspoons of vegetable pulp at 5 P.M., and 8 teaspoons of farina or arrowroot with the 6 P.M. bottle.

At *one year* may have 1 ounce fruit juice at 9 A.M., the yolk of a hard-cooked egg at 10 A.M., 4 teaspoons crusht zwieback at 2 P.M., and 8 teaspoons of farina or arrowroot at 6 P.M.

TOP-MILK FEEDING

When infants do not gain in weight and have a tendency to constipation, then top milk feeding may be tried. Frequently they can assimilate cream equally as well as normal infants can assimilate whole milk. If vomiting or belching follows the use of top milk then stop the same and give the whole milk formula adapted to the infant's age.

In using top milk for infant feeding the milk is allowed to stand in a quart bottle at a temperature of 45° to 50° F. for the same length of time as when gravity cream is desired—five hours—when the quantity needed is removed from the top of the bottle with a Chapin dipper and diluted with water to which maltose is added.

From a quart bottle of pasteurized milk on which the cream has risen, dip from the top

sixteen ounces and mix. From average milk this should contain:

7.0 per cent. fat
3.2 per cent. sugar
3.2 per cent. total solids

TOP-MILK FORMULAS FOR VARIOUS AGES

Mix top milk, maltose and water. Steam ten minutes. then divide into the required number of feedings.

From the third to the tenth day:

Milk (top 16 ounces)..... 3 ounces
Maltose ..... ½ ounce
Water to make..... 16 ounces

Eight feedings in 24 hours; 1 to 1½ ounces every 3 hours. If baby cries from hunger. feed every 2½ hours.

From the tenth to the twenty-first day:

Milk (top 16 ounces)..... 6 ounces
Maltose ..... ¾ ounces
Water to make..... 24 ounces

Eight feedings in 24 hours; 1½ to 2 ounces every 2½ to 3 hours.

From the third to the sixth week:

Milk (top 16 ounces)..... 10 ounces
Maltose ..... 1 ounce
Water to make..... 32 ounces

Seven feedings in 24 hours; 2 to 3 ounces every 2½ to 3 hours.

From the sixth week to the third month:

Milk (top 16 ounces)..... 12 ounces
Maltose ..... 1 ounce
Water to make..... 32 ounces

Six feedings in 24 hours; 2½ to 4 ounces every 3 to 3½ hours.

From the third to the fifth month:

After this age two bottles of milk are required, sixteen ounces being taken from the top of each bottle and mixed.

Milk (top 16 ounces)..... 18 ounces
Maltose ..... 1 ounce
Water to make..... 40 ounces

Six feedings in 24 hours; 4 to 5 ounces every 3½ hours.

From the fifth to the seventh month:

Milk (top 16 ounces)..... 21 ounces
Maltose ..... 1 ounce
Water to make..... 42 ounces

Five feedings in 24 hours; 5 to 7 ounces every 3½ to 4 hours.

From the seventh to the ninth month:

Milk (top 16 ounces)..... 27 ounces
Maltose .....1¼ ounces
Water to make..... 48 ounces

Five feedings in 24 hours; 6 to 8 ounces every 4 hours.

From the ninth to the twelfth month:

Milk (top 16 ounces)..... 35 ounces
Maltose .....1¼ ounces
Water to make..... 56 ounces

Four feedings in 24 hours; 7 to 9 ounces every 4 hours.

After the twelfth month whole milk may be given.

AN INFANT FROM TWELVE TO EIGHTEEN MONTHS OLD

Use Fresh, Raw Milk Warmed to Feeding Temperature

Milk, 8 ounces. 6 A.M.
Huntly & Palmer biscuit.

Juice of an orange or 1 ounce pineapple juice. 8:30 A.M.

Saucer of steamed oatmeal, farina, hominy, cream of wheat, yellow cornmeal or wheatena served with milk or thin cream. 9:30 A.M.
One piece zwieback, rusk or toast with butter.
Milk, 6 ounces.

One-half ounce steak or roast beef juice, baked potato with yolk of hard-cooked egg, and stewed prune pulp. Or: 12:30 A.M.
Chicken and chopped noodle soup, rice with yolk of hard-cooked egg and stewed peaches.

Or:

Beef and farina or carrot soup, spinach with yolk of hard-cooked egg, and stewed apricots or apple sauce.

(On very warm days give cold consommé instead of the warm soup.)

3:30 P.M. Milk, 8 ounces.

6 P.M. Saucer of arrowroot or cornstarch pudding, junket or cream cheese on biscuit.

10-11 P.M. If awake and restless, milk, 8 ounces.

(To make a hard-cooked egg yolk—Place the egg in a pan and cover with boiling water. Do not allow the water to boil after the egg is put in, but keep it hot for 45 minutes. Cooked in this way the yolk will be formed, but mealy and easily powdered.)

FROM ONE AND ONE-HALF TO TWO AND ONE-HALF YEARS

6-7 A.M. Milk, 8 ounces.

Two pieces of zwieback, rusk or Huntly & Palmer biscuits.

8 A.M. Juice of an orange.

Steamed farina, oatmeal, hominy, or cream of wheat with chopped dates or figs, raw or stewed; a coddled or poached egg, or arrowroot pudding. 9 A.M.

Crisp toast, buttered.

Milk, 6 ounces.

Beef or chicken broth * thickened with sago, rice or farina, clear broth with yolk of egg, or 1 ounce steak or roast beef juice. 12:30 P.M.

Baked potato, spinach, carrots, peas, string beans, beets, asparagus tips or celery (all stewed).†

Stewed prunes, stewed figs, baked apple or apple sauce. Huntley & Palmer biscuits, graham wafers or lady fingers.

Milk, 8 ounces. 3:30 P.M.

Wheatsworth cracker.

Soft-cooked egg, junket, custard, cornstarch, tapioca, or farina pudding, or cream cheese on biscuit. 6:30 P.M.

Half of a sliced banana or raw scraped apple. Cup of milk or weak cocoa.

* When fresh soups are not available then canned soups such as the Franco-American soups may be used.

† Fresh vegetables should be used whenever possible. Canned vegetables may be used when fresh are not obtainable.

FOR A CHILD OF THREE YEARS AND OLDER

7:30 P.M. Juice of an orange, or fresh fruit in season.

Yellow cornmeal, cream of wheat, oatmeal, force, puffed rice or shredded wheat with cream or milk and sugar.

Coddled egg with one strip broiled bacon.

Toast, graham or whole wheat bread with butter. Cup of milk.

12:30 P.M. Chicken or beef broth thickened with farina, rice, barley or home-made noodles, or:

One ounce steak or roast beef juice over baked potato.

Broiled lamb chop, steak, chicken, squab, roast beef, mackerel, halibut or trout.

Spinach, peas, beans, carrots, asparagus, grated corn, tomatoes, celery or onions (all boiled).

Stewed fruits or berries in season.

3:30 P.M. Unsweetened crackers with fruit jam. On cold days a cup of malted milk (4 teaspoons Horlick's malted milk to a teacup hot water) or a cup of cocoa. Warm days, buttermilk.

1:30 P.M. Shredded ham omelet, scrambled egg, cornstarch or rice pudding, custard, Philadelphia cream cheese, macaroni or noodles.

Cup of cocoa or milk.

Fresh fruits in season.

Bread and butter.

CANDY

Under modern conditions it is almost impossible to prohibit all candy. The child's craving for sweets is natural, but under no consideration should they be given whenever desired, but when given they should be given either with, or just after, a meal, never before a meal as they will disturb digestion and take away the appetite. Plain taffies, barley sugar, and hard candies which are simply flavored sugar are preferred. Cream-filled chocolates and fancy candies should never be given. Pure milk chocolate, while nourishing, is hard to digest, and must be given in very small quantities. Children under three years should have peppermints only.

FRUITS

Fruits, as a rule, are easily digested by most children. For very young children stewed fruits (with the exception of orange and pineapple juice) are preferable to raw, because the cellulose, or woody fiber, is softened during cooking. If covered while they are cooking very little of their nutritive value will be lost.

All fruits to be eaten raw must be thoroughly washed, even those which are peeled. They must be neither under-ripe nor over-ripe. The banana contains more nourishment than any other fruit, and contrary to the popular be

lief, is not indigestible. Most children of three years can digest them perfectly. But a banana is not ripe until black spots appear on the peel. The fruit should be peeled, then scraped of the fuzzy covering, sliced, and served with milk.

VEGETABLES

Cook vegetables only long enough to make them tender. Starchy vegetables should be placed in boiling water. Vegetables having a sweet, mild-flavored juice such as string beans and green peas should be cooked in a covered utensil in a small quantity of water, which is served with the vegetable. Vegetables having a strong-flavored juice should be cooked uncovered. These vegetables are more palatable if creamed. Vegetables should not be salted until they have cooked ten minutes, because the salt tends to draw out the juices.

	Time for Cooking
Spinach	30 to 40 minutes
Lettuce	30 to 40 minutes
String beans	30 to 60 minutes
Beet greens	40 to 50 minutes
Asparagus tips	15 to 30 minutes
Grated corn	15 to 30 minutes
Kohlrabi	20 to 40 minutes
Carrots (young)	40 to 60 minutes
Peas	20 to 30 minutes

White Sauce for Creamed Vegetables

1 level tablespoon flour.
1 level tablespoon butter or fat.
½ level teaspoon salt.
½ cup liquid (water, milk, vegetable juice or meat stock).

Boiled Spinach

Spinach or a green salad must be carefully washed through 4 or 5 waters, or until all sand and dirt are removed. When clean, drop into boiling water and cook until tender. Remove the lid and evaporate most of the water by keeping it at steaming temperature. Hash or chop them, and add salt and butter.

Spinach Pulp

Prepare as above. Force through a fine sieve or through cheese-cloth. Throw away the tough fiber that can not be forced through the cloth.

Spinach Water

After boiling spinach, and evaporating most of the water, press the leaves with a spoon. The overflow into the spoon is the spinach water, which may be fed to infants of 3 months.

CEREALS

Cereals are made from hard grains and contain much starch. They should be cooked only long enough to make them easily digested. To steam farina several hours, as advocated by some, is unnecessary and harmful. Farina requires 30 minutes cooking. Rice can be thoroughly cooked in 30 to 40 minutes. Sift

the dry cereal slowly into salted, boiling water, stirring all the while to prevent lumping. The pulverized cereals, or cereal flours, should first be mixed with cold water, then poured slowly into boiling water. Cook five minutes directly over the fire, then cover and place in the double boiler, and steam for the time required.

When the coal range is used, a very convenient way to cook the cereal is to start it cooking at suppertime and leave closely covered on the back of the range all night.

PROPORTIONS AND TIME FOR COOKING CEREALS

½ Cup	Cups Salted Water	Boiling Time
Rice	1½	30 minutes (steam 40 minutes)
Farina	2	30 minutes
Rolled oats	1½	1 hour
Hominy	2	2 hours
Cornmeal	2	3 hours
Wheatena	2	1 hour
Cream of wheat	2	1 hour

For the sake of variety and to tempt a child who is not fond of cereals, stewed figs, dates, dried currants or seeded cherries may be added just before serving or they may be cooked with the cereals.

Boiled Rice

Rice must be cooked differently from other cereals. There is danger of overcooking and

having it soggy. Add ½ cup of rice slowly to 1½ cups boiling water that has been salted. Let it boil rapidly without stirring (cover the kettle) for 25 to 30 minutes, or until soft. Then pour it into a colander to drain. Stand it in the oven, leaving the door wide open, or on a very low flame, to dry for a few minutes. This drying evaporates the moisture, leaving the rice soft and perfectly dry. Serve with bits of raw butter, or stewed fruit.

Oatmeal or Crusht Oats

Add one heaping tablespoon of crusht oats and ½ teaspoon of salt to a pint of water. Stir until the salt is dissolved, and stand it on the back part of the fire over night. In the morning stand it over a hot fire, and let it boil 1 hour without stirring. Serve with chopped raw or stewed figs.

Farina

Add ½ cup farina to 2 cups salted water, sifting it in slowly, with constant stirring. Cover, and boil slowly for 30 minutes. Serve with chopped stewed dates.

Arrowroot or Cornstarch Pudding

Dissolve 1 rounded teaspoon of arrowroot or cornstarch in 4 ounces of water, and 4 ounces of milk, add 1 teaspoon of granulated sugar and boil 10 minutes.

May be flavored with a few drops extract of vanilla or with a level teaspoon of cocoa or chocolate.

MISCELLANEOUS RECIPES

Barley Water

To make barley water add one tablespoonful of pearl barley to one quart of cold water, boil two hours, adding water from time to time. Strain through muslin and add enough boiled water to make one quart. When the barley flour is used mix two teaspoonfuls of the flour in a little cold water, add one quart of water and boil fifteen minutes. Strain through muslin if there are any lumps, and add enough boiled water to make one quart.

Rice Water

Rice water is made in the same manner as barley water, one tablespoonful of rice being used to one quart of water. When rice flour is used, add two teaspoonfuls to a quart of water.

Oatmeal Water

Oatmeal water is made in the same manner as barley water. Use one and one-half tablespoonfuls of oatmeal to one quart of water.

Gruels

Gruel is made by adding two teaspoonfuls of rice flour, barley flour or oatmeal to one pint of cold water, and boiling briskly for one-half hour. Add a pinch of salt and a teaspoonful of granulated sugar.

Albumin Water

To make albumin water add the white of one raw egg to one-half pint of water. Pour the egg and water into a clean bottle and shake well. Feed through a nipple or by spoon.

Nutritious Lemonade

A nourishing drink is made by adding the juice of half a lemon to the yolk of a raw egg;

let it stand for five minutes, and then add two teaspoonfuls of granulated sugar and five ounces of water.

Nutritious Orangeade

Beat the white of one raw egg with one teaspoonful of granulated sugar and add the juice of one orange and five ounces of water.

Junket

Take one-half pint of fresh cows' milk and heat it lukewarm (about 115° F.); add one teaspoonful of Fairchild's essence of pepsin and stir just enough to mix. Pour it into cups and let it stand in a cool place until firmly curdled. Serve plain or with a little sugar.

Whey

Curdle warm milk with the essence of pepsin as directed in making junket. After the milk has curdled or clotted beat up the curd with a fork and strain it. The liquid is the whey which may be sweetened by adding one teaspoonful of maltose.

Beef Juice

Exprest beef juice is obtained by slightly broiling a piece of lean beef, and squeezing the juice from it with a lemon squeezer or a meat press. One pound of steak yields from two to four ounces of juice. Flavor it with a little salt and slightly warm it by standing a cup containing the beef juice in a bowl of hot water.

Broths

Take one pound of lean mutton, veal, beef or chicken, including some of the bone, a sprig of parsley and a blade of celery for one quart of cold water containing a pinch of salt.

Cook slowly down to about 8 ounces, for three hours, adding water from time to time, strain through muslin and remove the greater part of the fat.

Weak Tea for Thirst

Weak, cold tea (English Breakfast) made by steeping about three tea leaves in one cup of boiling water for two minutes, is very valuable to quench thirst in a baby suffering with diarrhea. Two or three teaspoonfuls may be given at one time and repeated every half-hour. Besides the cooling effect tea has a decided astringent property which makes it valuable in diarrhea.

Gelatine Pudding

A delicious dessert for a child two years old or older is made with gelatin powder and hot water. Cox's, Knox's, or Price's gelatin powder may be used. The directions for the proper proportion of powder and water will be found on each label.

Custard

Beat together one fresh egg and a teaspoonful of granulated sugar; pour into a cup and add four ounces of milk, then tie over the cup a piece of linen, place the cup in a shallow saucepan half full of water, and boil ten minutes.

Soft-cooked or Coddled Egg

Place a fresh egg in enough boiling water to cover it, move it to the back of the stove and let it stand five minutes where the water will keep hot, but not boil. Serve with a pinch of salt. An egg to be properly cooked

should never be boiled in boiling water, as the white hardens before the yolk is cooked. The yolk and white should be of a jelly-like consistency.

Hard-cooked Egg Yolk

Place the egg in a pan and cover it with boiling water. Do not allow the water to boil after the egg is in, but keep it hot for 45 minutes. Cooked in this way the yolk will be formed, mealy and easily powdered.

Toast

Place a slice of bread in the oven, and dry until crisp but not brown. Place it on a toast fork and hold it over the flame of a coal fire for a few seconds until brown on both sides. Butter while hot.

Raw Scraped Beef

This meat pulp is prepared by scraping with a dull knife a piece of raw or underdone round steak. Add salt to taste. The raw yolk of egg may also be added to the meat.

Baked Flour (Flour Ball)

Tie several pounds of wheat flour in a cheese-cloth bag and boil in a pot of water for five hours. Remove from water and place in oven, and bake until quite brown on the outside. It will require from two to three hours slow baking. Break open and throw away the brown shell; the remainder, the baked flour, must then be grated into a powder.

Buttermilk Lactic Acid Milk

Boil one quart of milk, and when cool, skim off the skin that rises. Add one teaspoonful of the pure culture of the lactic acid bacillus, or one lactic acid tablet containing the bacillus

(can be bought in any drug store). Set this inoculated milk in a warm place (temperature about 100° F.) for twenty-four to thirty-six hours. The lumpy mixture must then be thoroughly shaken, and if of a thick, creamy consistency, must be placed in a cool place to retard further souring.

Malt Soup

Dissolve 3½ ounces of malt soup * in 1 pint of warm water. Then mix 3 ounces (in measure) or 2 ounces (in weight) of wheat flour in 1 pint of milk. When the wheat flour and milk solution is strained it is added to the malt soup extract solution and slowly brought to a boil, being stirred constantly over a slow fire. Cool it off quickly by standing it in cold water.

* Malt soup made by the Maltine Company of Brooklyn

PART III

Miscellaneous Diseases and Emergencies

CHAPTER I

VOMITING—COLIC—HICCUP CONVULSIONS

THERE are so many causes for vomiting in infants and children that whatever it be, the cause should be carefully studied. Vomiting may be the result of overfeeding, or due to infants gulping their food or drinking it too hastily. When the vomiting that is due to improper feeding continues, absolute rest of the stomach is demanded. In such cases from an interval of two hours there should be a change so that we feed once in three or even four hours. In many cases of vomiting the food is too rich in fat (cream); hence more water should be added. When vomiting follows breast feeding, the baby should receive several teaspoonfuls of lime water with several of boiled water before each feeding to dilute the breast milk. When the breast milk contains too much cream, then spitting, belching, and vomiting will result.

From Incorrect Feeding

Vomiting may be caused by disease; hence repeated vomiting with or without fever means

Due to Concussion

something more than a trivial stomach complaint. For example: If a child falls down a flight of stairs and continues to vomit, such vomiting is due to concussion of the brain.

Due to Disease

If a child is developing scarlet fever the first symptom usually noted will be repeated attacks of vomiting. Brain fever and tuberculous meningitis usually begin with vomiting. Fever, convulsions, nervous twitchings, and gradual loss of weight are evident. No amount of changing of the food formula will relieve such attacks.

When vomiting occurs, give a dose of castor oil, or a rhubarb and soda tablet, dissolved in a little water, repeat this dose in two hours if vomiting continues. Dilute the food by using one-half the quantity of milk previously given and add an equal part of water. If vomiting still persists after these measures have been taken, consult the physician at once.

COLIC

Colic, as it frequently occurs in young infants, is usually caused by indigestion. It occurs most frequently in bottle-fed infants. When it occurs frequently in a breast-fed infant, give an ounce of hot water just before nursing. The mother should see that her bowels move freely each day; she should take plenty of exercise and a light, nourishing diet.

When colic exists baby will draw up his legs on the abdomen and cry and scream. I have already in the article on "Cry," called attention to the peculiar, sharp cry denoting pain. The abdomen is usually distended and if the ear is placed over the abdomen a distinct rumbling noise can be heard. No amount of rocking or soothing will comfort the baby until the colic is relieved. A hot-water bag, or a warm flaxseed poultice, should be applied to the abdomen. Rubbing the abdomen with warm sweet oil, as described in the article on massage, will usually relieve the pain. One drop of essence of peppermint to a teaspoonful of warm water may be given every fifteen minutes until baby is soothed. *Injections of warm soap water into the bowel will instantly relieve the colic.* When colic recurs the food requires modification. As a rule we must add less milk and increase the diluent, be it rice or barley water.

HICCUP

Hiccup is due to a spasm of the diaphragm. A tight-fitting abdominal bandage will frequently check this spasm. One drop of Hoffman's anodyne may be given every hour to a baby one year old, and every half-hour to an older child.

CONVULSIONS

If the baby overloads his stomach, or if improper food has been given and stagnates in the intestine, general poisoning may result, with fever and convulsions. When convulsions appear the muscles of the arms and legs are usually stiffened, the facial muscles are distorted, the eyes roll upward, the jaws are firm, the teeth locked, and frothing of the mouth may take place. When convulsions occur the physician should be summoned; until then, the following general rules should be followed:

Mustard Foot-bath

An ice-cold cloth or an ice-bag may be laid on the head. A foot-bath should be given in tepid water at a temperature of 100° F., to which one or two tablespoonfuls of powdered mustard should be added. The feet should be bathed until the skin is reddened or until the muscular rigidity ceases. The bath should not be prolonged more than three minutes. If the spasm continues after the mustard foot-bath has been given, then a pint of soap-water should be injected into the bowels as an enema. This will empty the bowel and frequently relieve the spasm.

CHAPTER II

CONSTIPATION

In Breast-fed Babies

THE baby's bowels should move at least once in every twenty-four hours. If the action of the bowels is sluggish, he will not have a movement every day. This sluggish action can be caused by different conditions, but is most often due to faulty feeding. If the baby is fed at the breast, the mother or wet-nurse must see that her breast milk is kept in a healthy state. Her milk should be examined by a physician or chemist to determine whether or no enough fat (cream) is present. If a deficiency of cream exists then we can give baby one or more teaspoonfuls of cream from cows' milk, in a little warm water immediately before nursing. Several teaspoonfuls of water sweetened with granulated sugar and given before nursing will frequently relieve constipation.

In Bottle-fed Babies

If the baby is bottle-fed and his digestion is good, then increase the quantity of cream by adding a teaspoonful to each bottle. If milk

has been subjected to prolonged heating, then stop using boiled or pasteurized milk. Give milk warmed to about 100° F. or the usual feeding temperature. A teaspoonful of Mead's Dextri-maltose No. 3 added to each bottle will modify constipation. A teaspoonful or more of malt soup * added to each bottle will also have a laxative effect. Half a teaspoonful of honey may be given twice a day.

When constipation follows the use of any food, it can be corrected by adding 5 to 10 grains of phosphate of soda or ½ teaspoon of calcined magnesia to the morning bottle. No more than one dose should be given in a day. If this does not correct the constipation, then no change of food should be made without medical advice.

Water

A drink of water between feedings will frequently help to relieve continued constipation.

Fruit and Fruit Juices

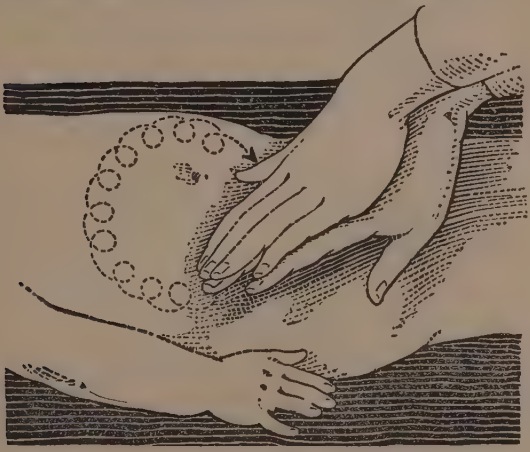
In older children scraped pulp of raw apple or the pulp of a good mellow peach will aid in relieving constipation. Apple sauce or prune jelly may be given between meals. Orange juice, grape juice, pineapple juice or apple cider will be found beneficial.

Massage

Kneading or stroking the abdomen over the bowels will stimulate the circulation if regularly performed. The fingers or hands of the

* Maltine Company, Brooklyn.

mother or nurse should be oiled and by means of gentle stroking begin in the following manner: Have your hands warmed as well as oiled, begin at the right groin and lightly rub the fingers in a circular motion upward, until the umbilicus is reached; then rub across the



CORRECT METHOD OF GIVING MASSAGE TO RELIEVE CONSTIPATION

Note the Position of the Right Hand of the Nurse

umbilicus and down the left side to the groin. Begin again at the right groin and press a little deeper each time until the baby becomes accustomed to it. This should be done every morning and evening for from five to ten

minutes and can be continued for several weeks. In obstinate cases several months of treatment may be necessary.

Enema

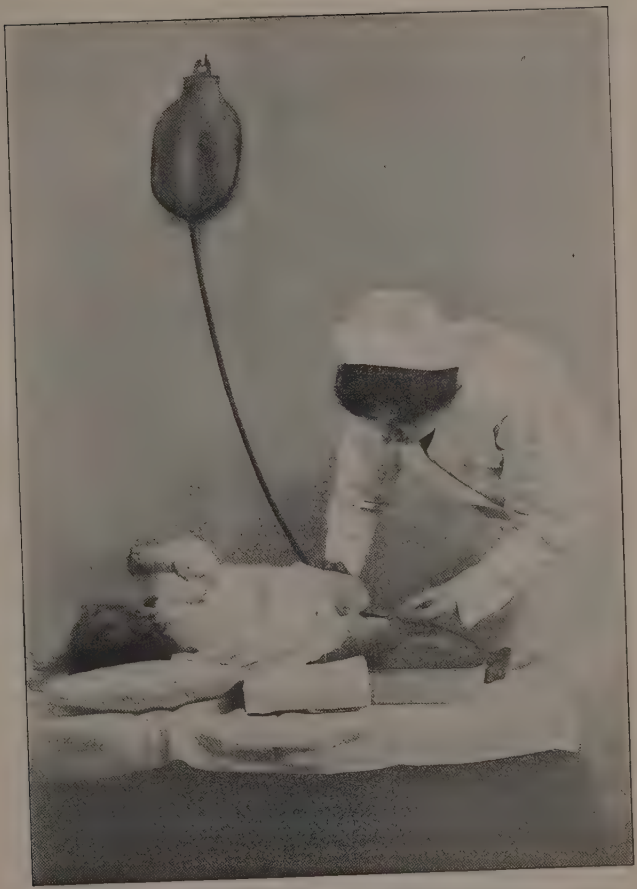
The baby should not be allowed to go more than twenty-four hours without a movement. Immediate relief can be given by an injection into the bowel through the rectum of one-half pint of lukewarm castile soap water, to which one tablespoonful of glycerin has been added.

Suppositories

Sometimes a very little stimulant to the rectum is all that is needed. A suppository usually acts quickly. The best for the baby are those made of glycerin or gluten. They are small and conical in shape and resemble the old-fashioned "soap stick." One of these suppositories should be dipt into vaselin or olive oil and gently inserted into the baby's rectum and held there until the movement pushes it out. These suppositories may be used daily for several weeks, if required.

Drugs

No mother or nurse should give the baby any drugs for his bowel movement without the supervision of a physician. They should try any or all the remedies here suggested before giving the baby any drugs. Many cases of chronic catarrh of the bowels have occurred through the constant use of cathartics.



CORRECT POSITION OF A BABY WHEN GIVING AN INJECTION TO AID THE MOVEMENT OF THE BOWELS

CHAPTER III

RICKETS, SCURVY, JAUNDICE

RICKETS is a disease caused by improper feeding. The bones, instead of being hard and firm, are soft and spongy, and sometimes very thin. The muscles, instead of being hard and firm, are soft and flabby. There is a general backwardness of development. Rickety children are backward in teething, and when the teeth do appear, decay very rapidly. They are backward in walking and backward in talking and the soft-spot (fontanel) on the top of the head remains open months longer than it should. Owing to the soft bones which yield on walking the child becomes bow-legged. The ends of the bones are enlarged, and the ribs are beaded.

These children usually suffer from constipation and have a distended abdomen. They are restless at night and peevish by day. They perspire freely, especially while feeding. The back of the head is usually bald from rubbing the head back and forth on the pillow. If a

breast-fed baby shows signs of rickets the breast milk must be examined at once by a chemist in order to determine the quantity of fat, sugar and protein that it contains. When nursing is prolonged and the mother menstruates regularly, rickets may develop. As a rule babies fed on condensed milk or those receiving insufficient fat or cream develop rickets. When the baby is kept indoors and over-bundled with clothing, he soon loses his appetite and if this continues for weeks and months he will become undernourished, and as a result rickets in some form will be shown. Fresh cows' milk simply warmed, not boiled, should be given. Fruit juices, such as orange, lemon, pineapple and grape juice and raw-scraped apple pulp should be given. Butter, yolk of raw egg, with sugar, vegetables, cereals, and the dairy products, such as cream cheese should form the bulk of the diet. When severe constipation is encountered, several teaspoonfuls of sweet oil or honey may be given daily. Cod-liver oil, maltine or morrholin should be given in doses of one teaspoonful three times a day. Five grains of vitaphos, given in milk three times a day, will strengthen the bones. Children suffering with rickets require fresh air; they should sleep in well-ventilated rooms. While out of doors, they should be placed in the sun. A sun bath

is very important. The daily morning bath should be of lukewarm water to which one pound of sea salt is added. After the bath the child should be briskly rubbed with a coarse turkish towel. No case of rickets should be neglected or the deformities will remain throughout life.

SCURVY

A child that has been incorrectly fed will frequently show evidences of such bad feeding by having a weakened framework. The bones will be spongy and the muscles flabby. The joints will swell and resemble rheumatism. The child will be covered with bluish-black spots as tho it were bruised. New spots will appear when the child is roughly handled. The gums have a deep purple color, are swollen and look spongy. They frequently bleed. Nosebleed or blood in the urine and stools accompanies this condition. The child appears pale and has no appetite.

If the child has been fed with a patent food its food must be changed at once. Raw milk must be given and all forms of steaming and sterilizing must be stopt. Orange juice, grape juice and raw steak juice must be added to the diet. Likewise baked white potato, barley, unpolished rice, fresh stewed vegetables such as turnips, carrots, whole peas (mashed

including the outer shells), spinach, beet greens and lettuce. This is generally all the treatment necessary.

JAUNDICE

In jaundice there is an intense yellowish color to the skin. The whites of the eyes appear yellowish. The urine instead of being yellow in color has a brownish color. The stools instead of being brown, are white or clay colored. The child may vomit and fever may be present. Headache will be complained of by older children. They are languid and tired and will want to go to bed. When the new-born baby has jaundice the physician should at once be summoned. Jaundice may be caused by a liver disturbance or by some poison in the blood. It may be due to an infection of the umbilicus. In older children jaundice is frequently associated with catarrh of the stomach, in which case it extends to the bile ducts. Under the care of a physician these cases recover.

CHAPTER IV

FEVER AND TEMPERATURE

THE normal temperature of a baby ranges between 98½ and 99½° F. If the baby has a temperature of 99 to 100° F. he should not be considered feverish. A temperature of 101 to 102° F. usually means a mild disease. A temperature of 103, 104 or 105° F. means a severe febrile condition. Children are very sensitive and hence respond very quickly to conditions giving rise to fever. For instance, an overloaded stomach or a stagnant bit of fermenting milk-curd in the intestine may give rise to auto-intoxication resulting in fever as high as 105° F. and frequently will cause convulsions.

How to Take Temperature

Use a clinical thermometer. Shake the thermometer so that the column of mercury drops below 95°. Apply vaselin or oil to the end containing the mercury. Place the infant on the left side and insert the thermometer one inch into the rectum. Let it remain two to three minutes. The end of the column of mer-

cury indicates the degree of temperature. The thermometer should be washed with soap and cold water. The mercury remains registered in the tube until it is again shaken down.

Sudden Fever

If a child is well in the morning and suddenly develops a temperature of 103, 104 or 105° F., this usually implies a sudden disturbance of the stomach or bowels. As a rule sudden fever is not dangerous, but responds readily to treatment.

Slow Fever

When fever comes on gradually, and increases ½ to 1 degree every day for a number of days, it is usually a bad sign. This form of temperature is met with in typhoid fever, and in meningitis.

It is important to remember that fever is absent in many diseased conditions. For example, brain fever and even scarlet fever and pneumonia may sometimes be present and still the temperature of the body be normal during the whole course of the disease.

What to Do for Fever

A teaspoonful of castor oil is always a safe remedy no matter what brought on the fever. A teaspoonful of aromatic sirup of rhubarb may be given every hour for three doses. One of the most rapid methods of reducing fever is by washing the bowel with a pint of soap-water, by means of a fountain or bag syringe. If the mother or nurse is skilful the injection may be given high up in the bowel, with the aid

of a small rubber catheter. Fifteen drops of sweet spirits of niter in a teaspoonful of water may be given. This may be repeated every hour until three or four doses have been given. As niter acts on the kidneys it eliminates fever and poisonous products through the kidneys by increasing the flow of urine.

Sponging the Body

If fever persists then a sponge bath, consisting of one part of alcohol and five parts of cold water, should be given. The body should be sponged every half-hour until the physician arrives.

Rash

If an eruption is found on the body, a physician should be consulted before any sponging or cooling is begun.

Feeding During Fever

If the child is still on a milk diet, we should give a weaker food by taking away half the quantity of milk and adding the same amount of water. In some fevers even weak milk will not be tolerated and nothing but whey or thin soups will be retained. Evaporated milk * diluted with water may be tried.

Weak tea to which evaporated or condensed milk is added may be given for thirst.

Older children who have been on a diet of solid food should receive only liquids during the fever. Plenty of water should be given.

*Read page 84.

CHAPTER V

GENERAL RULES FOR CONTAGIOUS DISEASES AND FEVERS—ISOLATION

PUT the child to bed.

Give a teaspoon of castor oil or aromatic sirup of rhubarb.

One hour later give an infant 15 drops of sweet spirits of niter, and an older child 30 drops.

If twitching of the muscles is noticed and the child has had convulsions before, then give a strong mustard foot-bath for two or three minutes, and apply cold, wet cloths to the forehead, changing them every five minutes.

If twitching continues one-half hour after the foot-bath, then give an injection into the rectum of one pint of soap water.

For thirst give one or several tablespoonfuls of citrate of magnesia or orange juice.

Do not give pure milk in fever, but dilute the food one-half. Thin soups, lemonade and orangeade may also be given.

Do not bathe the child if an eruption is

seen on the skin unless the physician especially orders it.

Wrap the patient in a blanket and take him out of the sick-room into an adjoining room twice a day to permit thorough ventilation of the sick-room.

The spread of most diseases is caused through ignorance or carelessness. So-called colds, such as running nose, sore throat and bronchitis are easily communicated to children and may be serious for the baby. Do not sneeze or cough in the baby's face. A mother or nurse should protect the baby from catching her own cold by tying a handkerchief or piece of cheese-cloth over her nose and mouth when nursing or caring for the baby. She should not kiss the baby, neither should she use her own handkerchief for the baby. The baby should never be taken to the room of a sick person, until the true nature of the illness is known. If the disease is contagious, the separation must be kept up. The patient must be isolated. This isolation consists in placing the patient in a room by himself, and giving him separate dishes, washcloths, towels, etc. Only one person should care for him, and the clothing of this person should be protected by a long gown when in the patient's room. After handling the patient the hands must be carefully washed in warm water and soap.

The Spread of Disease

Isolation

CHAPTER VI

MEASLES, SCARLET FEVER, CHICKEN-POX, DIPHTHERIA, CROUP, AND INFANTILE PARALYSIS

MEASLES

IN measles the first thing usually noticed by the mother is that the baby appears to have taken cold. He will sneeze, have a catarrh in the head and cough. The eyes are congested or reddened, the appetite poor and there is usually fever. Three or four days later a rose-colored rash will appear on the face and neck, and later spread to the chest, arms and legs.

At the first symptoms the baby should be put to bed in a darkened room, or with his back to the light on account of the inflammation of the eyes. Plenty of fresh air should be allowed to enter, and the temperature of the room kept at about 70° F. All other children should be kept from the room or house if possible, as nine out of every ten, if exposed, will take this disease. If children remain well fourteen days after exposure, then

they will probably escape. As a rule the disease appears between seven and fourteen days after an exposure. Bathing should be stopt. No child should be permitted out of bed, no matter how good he feels until the rash has entirely disappeared. This may in some cases require a child to be in bed five to seven days. Complications can be avoided by this precaution. It is the careless mother or nurse who, disregarding a mild bronchitis, will expose a sick child in order to harden it and later find that the child has contracted a fatal pneumonia. Continued fever after the measles' rash has disappeared means the development of some complication, usually ear abscess or pus in the pleural cavity. Continued cough after measles should not be disregarded. Tuberculosis and chronic bronchitis very frequently follow measles.

Complications

GERMAN MEASLES

This disease resembles ordinary measles, altho it is a much milder disease and does not begin with sneezing and coughing. Sometimes there is a slight fever, but more often the first symptom noticed is the rash. The pale red rash usually appears all over the body. It varies in size from a pin-head to a small pea. It disappears in three or four days. The child should be kept in bed and

put on a light diet. This is all the treatment necessary. The patient should be isolated. If a child has been exposed to this disease he will usually show signs of it at any time from the fourth to the twentieth day after exposure.

SCARLET FEVER

The Rash

The early symptoms of scarlet fever are sore throat, headache, high fever, and vomiting which may occur in spite of a most careful diet. Convulsions sometimes occur. From twenty-four to thirty-six hours after the first symptoms are noticed a rash of a deep red or bluish-red color usually appears, first on the neck and chest, and later covering the body. It is a slightly elevated pin-point flush, so diffuse that the whole body has a very red appearance. This rash usually remains five or six days. The skin then begins to peel off or desquamate; this peeling takes from two to four weeks. The strictest isolation must be observed.

How Spread

The modern view of the contagiousness of scarlet fever is that the disease is conveyed by contact only. Discharges from the ear, nose, throat and vagina contain the active poison which transmits the disease. The skin peeling or desquamation is not regarded as a means of carrying the disease. The New York

Health Department therefore does not demand disinfection after the peeling is over.

When a rash resembling scarlet fever occurs, the glands in the neck as well as those in the groin and other parts of the body, become enlarged and remain so for several weeks. Glandular swelling does not accompany a so-called stomach rash caused by oatmeal, crab-meat, or strawberries or by ivy poisoning.

A child after being exposed to a case of scarlet fever may show the first symptoms any time within twelve days. The treatment must be left to the physician.

CHICKEN-POX

Chicken-pox is a contagious disease. If the baby has been exposed he will probably have an eruption between the fourth and fourteenth days after exposure. Usually the first symptom noticed is a slight fever and a series of red blotches scattered over the body. These red blotches are at first small, and gradually grow larger and resemble water blisters. In a few days they dry up and the crust falls off. The eruption appears in successive crops, as one crop disappears, another crop appears. The disease frequently attacks very young infants. It has nothing to do with vaccination. There is no danger in this disease if the child

is kept in bed, the bowels cleansed, and no solid food is given. It may be communicated to healthy children as late as sixteen days after the first symptoms appear.

DIPHTHERIA

Diphtheria first appears as yellowish, or grayish-yellow, spots or patches in the throat. These spots are seen on one or both tonsils or on the pharynx. There is usually fever, the temperature ranging between 101 and 102°. In simple tonsillitis the temperature is much higher, reaching 103 and 104°.

The glands of the neck, below the jaw, usually are swollen and there is pain on swallowing which will prevent the child from taking food.

When an infant refuses his bottle our first duty is to inspect the throat. Many infants will show no other symptom except loss of appetite and restlessness. No time should be lost when spots are seen. A physician should be called at once. To overlook diphtheria may mean the loss of a child.

Until the physician arrives, two to four ounces of citrate of magnesia may be given to cleanse the bowels. No solid food should be given, only milk, gruels and broths. For thirst, ice-cream and water ices should be given. For very young infants dilute the food

CORRECT METHOD OF HOLDING A BABY FOR THE EXAMINATION OF ITS MOUTH AND THROAT

one-half with water. The patient must be strictly isolated. If other children are exposed, they are likely to get the disease any time within one week after exposure.

FALSE CROUP

There are two kinds of croup, catarrhal or false croup and diphtheritic or true croup. Catarrhal or false croup is the kind that comes on suddenly in the night in an apparently healthy child. It is the result of a simple filling up with mucus. The baby may have had a cold or been exposed, but more often no special cause can be found for this sudden attack. The baby may wake up during the night with a hoarse barking or crowing cough, and seem to breathe with difficulty.

Croup Kettle

One of the best methods of relieving this cough is to have a croup kettle or a tea kettle with a long spout so placed that steam coming from the kettle will be inhaled by the baby. Ten or fifteen drops of spirits of turpentine may be added to the steaming water. This steam should be kept up for several hours so that the air in the room becomes saturated. If the attack is very severe a teaspoonful of sirup of ipecac may be given. If vomiting does not result then give another dose of ipecac in twenty minutes. This form of croup comes on suddenly and disappears suddenly

if the emetic is given. There is no danger to a child's life even tho such an attack comes on after exposure to cold.

True Croup

A croupous cough that is accompanied by fever and comes on very slowly is usually of a serious nature. If white patches or spots can be seen in the throat then the sooner the physician is consulted the better for the child

INFANTILE PARALYSIS

This is an infectious disease. How it is spread is not definitely known, but it may be taken directly from a sick person, or through a third person who has been with the patient.

The germ enters the nose or throat; therefore the throat should be gargled, and the nose sprayed with diluted listerine or Dobell's solution after being in the dusty street. As dirt is carried into the mouth by soiled fingers, frequent washing, especially before eating, is necessary.

The early symptoms are fever, usually vomiting and irritability. Later there is pain in the neck, back, arms or legs, an unsteady gait, and great weakness.

If paralysis occurs it usually appears between the second and fifth days. A child having a mild attack may recover without paralysis, and be a "carrier" of the disease

for months, as the germs of the disease are present in the discharges from the nose, throat and bowels, even in the mild cases.

Early in the disease the use of serum has prevented paralysis in many cases.

CHAPTER VII

WHOOPING-COUGH—TUBERCULOSIS

WHOOPING-COUGH

Prevention

INFANTS while nursing rarely or never contract whooping-cough. Immune substances in breast milk protect the infant. If an infant over one year old has been exposed to this cough we can protect him by an injection of vaccine. If we delay in notifying the physician then the vaccine is useless.

The first symptoms of whooping-cough are those of an ordinary cold with a cough. This lasts about ten days, when the cough gets stronger until a pronounced spasm appears. These spasms consist of a number of short, quick coughs, then a long-drawn inspiration known as "the whoop." During these coughing spasms the baby will get very red, sometimes bluish-red in the face, and frequently the spasm ends with a vomit. It will be noticed that the cough is worse indoors and is least troublesome out of doors. The spasms are strongest at night. This is usually so because the windows are tightly shut. Fresh

air night and day are very necessary for a cure.

Fresh Air

In the country a child suffering with whooping-cough or any chronic cough, should be placed on a sleeping porch. He should sleep out of doors and remain in the open air constantly. To have a child in the air by day, and in a stuffy room at night, defeats the object of our treatment. Fresh air will stop a cough more quickly than any other remedy. Windows should not be closed even if it is raining, but the child can be protected with covers and so kept warm if it is chilly. If the means of the family permit and the infant is young, a "Boggin's window crib" will be found advantageous.

Feeding

The danger in whooping-cough consists of exhaustion following lack of food as a result of the constant vomiting. If a breast-fed baby suffers with whooping-cough, the feeding should be more frequent and less in quantity. The same rule applies to a bottle-fed baby. For example: If baby has been receiving a bottle containing six ounces every three hours, he should, while the vomiting lasts, receive a bottle containing four ounces every two hours. If the swallowing of food provokes a coughing spasm and results in vomiting, then the food may be given, in some cases every hour. By this method baby will

have a chance to obtain a little nourishment from his food before it is thrown off. Concentrated food, such as yolk of egg, white of egg, and steak juice, made by expressing the juice from broiled steak, may be given. Older children may receive custard, junket, cereal puddings and raw-scraped steak mixed with the yolk of an egg. Cod-liver oil in teaspoonful doses given three or four times a day will nourish the body. Medication does not, as a rule, help in this disease. Anti-spasmodic drugs such as bromide of sodium or phenacetine, have a very soothing effect on the nervous system and insure rest at night, which is very necessary in infancy. A tight binder or adhesive plaster support for the chest will aid in relieving the force of the spasm. Whooping-cough runs its course in about twelve weeks; plenty of fresh air night and day, or a change of air to the seashore or mountains, tends to shorten the disease. Whooping-cough is one of the most contagious diseases and if a well child is exposed to it he is pretty sure to show symptoms within three weeks after exposure.

TUBERCULOSIS

Tuberculosis frequently begins in infancy. Occasionally it follows a prolonged whooping-cough or bronchitis. It may also follow measles. Cough with fever, lasting several

months, should always be regarded with suspicion.

Tuberculous children are languid, they perspire easily at night, and lose in weight.

The germs may enter the body by two channels: first, by the stomach, with milk from a tuberculous cow; second, by the lungs, through the inhalation of dust containing the germs, or the germs may penetrate the glands of the neck and cause meningitis.

The baby should never be allowed to sit on the floor unless the same is covered with a large floor-pad or blanket which is frequently washed. Dried expectoration can be carried from the street, on the shoes, and so introduce the germs into the house.

The tendency to tuberculosis is often inherited in families with weak lungs. An outdoor life, or sleeping on a porch with southern exposure will harden the child and aid in restoring health. We must depend on fresh air and proper food; drugs are useless.

COLD IN THE HEAD
RUNNING NOSE—CATARRH

Head colds are very common. They are caused by catarrh germs usually inhaled with the street dust. When grippe is prevalent the influenza germ may give rise to a cold in the

head and cause fever, peevishness, and swelling of the nostrils. The infant will be prevented from taking his bottle or nursing while this running nose exists. Sneezing, sniffling, and a running nose are the symptoms. If fever accompanies the cold one grain of phenacetine in a teaspoonful of water repeated every four hours will sometimes relieve the catarrh. A running nose is frequently a symptom of adenoids and one of the earliest symptoms of measles. Relief can be afforded by spraying the nose with warm water containing a pinch of bicarbonate of soda, morning and evening. If the nostrils are plugged with mucus one or two drops of alboline or sweet oil should be dropt into the nostrils from a spoon or a medicine dropper. Older children can be allowed to sniff salt water into the nostrils.

A weak solution of boracic acid sprayed into the nostrils several times a day will relieve the infant. To relieve the obstructed nostril, add one drop of camphor oil to two drops of warmed olive oil and put one drop into each nostril. If these mild remedies do not relieve the running nose it is safer to consult a physician. Now and then what appears to be a simple head cold may be a mild form of diphtheria of the nostrils. It is usually met with

in infants weakened by malnutrition and especially those having rickets.

MUMPS

In mumps the glands of the neck situated under the angle of the jaw become swollen. Sometimes both sides are affected. There is a loss of appetite, pain on opening the mouth and sometimes a slight fever. This disease can spread; hence all children must be kept away from it. If a child has been exposed he may develop symptoms as late as two or three weeks. These cases get well very easily if a liquid diet is given, the bowels kept loose and the swollen parts protected with cotton and oil silk.

SWOLLEN GLANDS

Swollen glands may occur on the sides of the neck or below the jaw, under the arms or in the groins. These swellings may disappear of themselves, but when they remain for months we must suspect a constitutional disease, such as tuberculosis or scrofula, to be the origin of the trouble. When glands swell on either side of the neck, the throat, especially the tonsils, require examination. Swollen glands in the neck may be caused by diphtheria in the nostrils or throat, or by an abscess forming in the ear. Lice will sometimes cause swelling of the glands in the neck and back of

the head. Swollen glands will sometimes appear in the armpits after vaccination.

A proper examination should be made by the physician to determine the cause of the glandular swellings.

ADENOIDS

Adenoids consist of small masses of reddened granulations resembling proud flesh. They occur in the back of the nose and on the pharynx. They can seldom be seen by looking into the throat, but can be felt by introducing the finger into the throat. If the child snores at night, is restless and can not sleep, if it can not breathe through its nose and the mouth is used for breathing, then adenoids are very likely present. When catarrh recurs frequently, adenoids are usually present. Bedwetting is frequently noted in children suffering with adenoids. These children are peevish, sensitive and cry; they are very nervous and must be coaxed to eat. They gag and vomit easily. They are usually very thin and frail and backward in development. They have a foul breath.

Adenoids if untreated will obstruct the Eustachian tube and frequently cause deafness. Restlessness and insomnia are frequently caused by adenoids. Children will lose weight and appear very pale if deprived of sleep.

When adenoids are removed they gain in weight and strength.

Deafness is frequently caused by adenoid vegetation in the throat. Deafness in children can frequently be cured by the simple removal of such growth. Catarrh, affecting the nose and throat, frequently closes the Eustachean tubes, resulting in deafness. The treatment is simple but can not be carried out by the average mother or nurse. Deafness

TONSILLITIS

When a child refuses to eat and has fever the throat should be examined. If the tonsils are inflamed they will be either reddened or coated with whitish pin-point spots. The temperature may reach as high as 102–104° F. Until a physician can prescribe, citrate of magnesia may be given in wineglassful doses, as it will relieve the thirst and has a laxative effect. Cold cloths should be wrapt around the neck and small pieces of cracked ice or ice-cream may be given.

This disease should be treated by a physician to avoid having chronic enlarged tonsils which may require removal later on.

RHEUMATISM

When children complain of pain in their joints, such pain must not always be attributed to growing—it may be rheumatism. Many

cases of rheumatism with fatal heart disease have been traced back to supposed "growing pain." Very active exercise indulged in by children with feeble muscles and joints is frequently followed by pain mistaken for "growing pains." There is always a cause for joint pain, and if such pain continues it is better to consult a physician.

CHAPTER VIII

SKIN DISEASES

ECZEMA

ECZEMA usually occurs as an inflammatory redness of the cheeks, arms and legs, especially between the thighs. It may occur at any age and is most frequently met with in the bottle-fed infant suffering with constipation and especially in babies suffering with rickets. An excess of sugar is a frequent cause. It may also be the result of unsanitary measures such as permitting an infant to fall asleep and not change its soiled diaper. Fever does not accompany this condition.

When eczema exists no soap should be used. The skin should be bathed in warm milk to which equal parts of bran water has been added. Bran water is made by adding one cupful of bran to one quart of hot water, allowed to soak for one-half hour, and then stirred occasionally and the liquid poured off. Oatmeal water may also be used to bathe the parts and will relieve the itching. After the

bath apply zinc salve. Stop all sugar and cereals. Reduce the quantity of floury foods such as bread. A teaspoonful of rhubarb and soda should be given three times a day. In many cases it is better to stop all bathing as water seems to irritate the skin. If the eczema does not disappear within a few days after the above treatment a physician should be consulted.

PRICKLY HEAT

In summer during the extreme heat a finely mottled rash is sometimes found on the skin of children. This condition may also occur in winter if the child is too warmly drest. To relieve this, the flannels must be laid aside and only muslin or linen worn next to the skin. The body should be powdered with talcum or wheat flour after being washed with pure cold water. If itching accompanies this rash, a bran bath should be given.

CHAFING

Very tight underclothing or very warm clothing produce perspiration. If such perspiration is very acid, it may cause irritation and by the friction of the clothing develop inflammation. When this continues the skin will appear highly inflamed and reddened, and at times develop crusts resembling eczema. When the buttocks or the genital tract is in-

flamed and reddened we will notice that the child moves its legs or an attempt to scratch is made by rubbing the thighs. If this condition persists for a number of days then the skin between the thighs will develop crusts and we have an eczema. Neglect to change a wet diaper may cause chafing. If a baby is soiled from stool and not properly cleaned, chafing may occur.

Do not use water to bathe the child. Clean the chafed parts with sweet oil and dust liberally with cornstarch. Zinc salve should cover the inflamed parts and if they do not improve within twenty-four hours consult a physician.

CHAPPED HANDS AND FACE

A tender skin when exposed to severe wind will sometimes crack and the skin appear very rough. This condition is very likely to occur if the skin is not properly dried before going out in the cold weather. At times a slight oozing of blood may take place. Apply melted cocoa-butter, cold-cream or zinc salve three or four times a day and stop bathing with water for at least one week.

SUNBURN

A highly inflamed and reddened skin frequently results from exposure to the sun's rays. Camphor ice, zinc salve or sweet cream from top milk applied several times a day will remove this inflammation.

HIVES

Round, red blotches, sometimes as large as a twenty-five cent piece, having a whitish center resembling a mosquito bite, may appear on the skin. They frequently follow a disordered stomach. These blotches come and go very quickly and require cooling with baking-soda moistened with cold water and made into a paste. As a rule a dose of castor oil or a teaspoonful of rhubarb and soda mixture for a baby one year old may be repeated once every three hours until the bowels are thoroughly cleansed. For a baby six months old one-half the dose should be given. It is a good plan to stop all milk for at least one or two days, and give instead sweetened rice-water or chicken broth. In an older child stop eggs or meat one or two days and give buttermilk instead. Plenty of water should be permitted.

BOILS

Boils are abscesses of the skin and usually occur on the head and neck. They are most frequently due to local infections. When these boils occur on the scalp the hair should be trimmed around the boil and an incision will be necessary to empty the pus. All boils require careful antiseptic dressings which should be applied by a trained nurse or a physician.

MOSQUITO BITES

To remove the heat from a sting of an insect or mosquito, the parts should be bathed with spirits of camphor or pure alcohol. If a child resides in a locality where mosquitoes abound, he should be screened both night and day. The germ of malaria can be carried by a mosquito and an infant may be infected through its bite. Sprinkling the pillow and bedclothing with a teaspoonful of alcohol to which ten drops of oil of sassafras has been added, has a tendency to keep mosquitoes away.

RINGWORM

A ringworm produces a round, red mark about the size of a twenty-five cent piece, sometimes larger. It is most frequently found on the forehead or scalp; it may, however, attack any part of the body. It is caused by a fungus which can be conveyed from person to person. If it appears on the scalp the hair should be cut short and the affected part painted with tincture of iodine. The cap, towel and everything coming in contact with the ringworm should be destroyed or it will convey the disease.

CHAPTER IX

ACCIDENTS AND EMERGENCIES

BURNS

IF the burn is mild and the skin but slightly broken, dust cornstarch or wheat flour over the burned area. Exclude air from the wound with a gauze bandage. If the burn is severe and blisters have been raised they should be opened with a new, clean needle, and after the water has been emptied from the blisters, linseed oil and lime water in equal parts should be applied by saturating sterilized cheese-cloth or clean linen. No one should think of treating a severe burn without consulting a physician.

SPLINTERS

If a splinter enters the flesh it should be removed with the aid of a clean, sharp needle and the part bathed thoroughly with witch-hazel. If a needle-point is imbedded and is difficult to dislodge a physician should be consulted. Frequently needle-points become so deeply lodged that an *X*-Ray examination must be made to locate them.

BUMPS AND CUTS

If a child falls and has a bump or a bruise, ice-cold cloths or cotton saturated with lead and opium wash should be applied. In the absence of lead and opium wash witch-hazel may be applied.

If the skin is lacerated or torn and bleeds freely the wound should be washed with a 1 per cent. carbolic solution or with half-strength peroxide solution. It is necessary to wash the wound at least twice a day and apply a piece of sterilized gauze and a bandage over the wound. No one should dress a wound without thoroughly scrubbing his finger-nails and hands. By introducing dirt from fingers or nails blood-poisoning can result.

If blood spurts from the wound, an artery has been cut and we should tie a handkerchief or a stout piece of muslin over the wound until a physician can be summoned.

If the cut is very slight it may be washed in equal parts of peroxide and boiled water and tied with a clean piece of linen.

FOREIGN BODIES

In the Throat

If an infant has swallowed a whistle, a button, a pin or similar object, and shows signs of difficulty with breathing the object swallowed has probably not passed far down, but

been caught in the throat. Holding the baby with its head down and tapping him firmly on the back will sometimes dislodge the foreign body; if not, the mother should try to reach it with her finger. If breathing becomes more labored and the lips turn blue give a teaspoon of sirup of ipecac to produce vomiting.

In the Stomach

If there is no difficulty with breathing we know the object has safely passed the throat and reached the stomach. Then do not give anything to make him vomit; nor give a cathartic as it may do harm by hurrying the object too rapidly through the intestine. Give the baby thickened pap, and potato or bread soaked in milk. These foods will help form a soft coating and bring it through the stomach and intestines. The stools should be examined daily until the object is passed. This usually requires from two to four days, occasionally a week or ten days. If, however, a child shows any symptoms of pain or distress he should immediately be taken to a physician for an *X*-ray examination.

In the Eye

Hold the lids apart and with the aid of a small piece of linen, try to remove the foreign substance. An eyestone or flaxseed placed in the corner of the eye will sometimes remove the foreign substance. If the foreign body is not easily dislodged, do not tamper with the eye, but call in a physician.

In the Nose

If a very young infant has a foreign body in the nostril, tickle the nostril by inserting a soft, dry feather. This will make him sneeze. In an older child the free nostril may be held shut and the child instructed to blow through the obstructed nostril.

No one but a physician or a trained nurse should attempt to syringe a nose, as there is danger of the liquid flowing through the nostril into the middle ear and causing an abscess.

In the Ear

An insect can usually be dislodged from the ear by pouring one or more drops of sweet oil into the ear. A bead or similar substance can be removed by syringing the ear with lukewarm water. Do not use any hairpins or button-hooks to dislodge foreign bodies. As a rule, more harm can be done by meddling with a deep-seated substance than by leaving the ear alone until a physician can be consulted.

POISONING

The general treatment for poisoning is to rid the stomach as quickly as possible of the poison taken. This is done by emetics, such as a teaspoonful of mustard or alum in a glass of lukewarm water, or lukewarm salt water, or a teaspoonful of ipecac, and then warm water, repeated every five minutes until vomiting has been produced. Then one or two teaspoonfuls of castor oil should be given.

If an acid such as carbolic or oxalic has been swallowed, then olive oil should be forced down the child's throat. Bicarbonate of soda and water may be given if any acid has been swallowed. Warm or cold milk may be given as an antidote to any poison, until the physician arrives and uses the stomach-pump to empty the stomach of its poisonous contents. If an overdose of soothing sirup or too much paregoric has been given, keep the baby awake by almost any means, such as slapping with a towel wet in cold water, or if the child is old enough walk him constantly up and down, or give a mustard foot-bath, until a doctor can get there. Give several drops of whisky in water, and repeat every ten minutes. If the stupor persists combine whisky with hot coffee.

BLEEDING

If the scalp bleeds, wash it with equal parts of peroxide and lukewarm water. Cut any hair away. Apply a thick piece of gauze and tie a bandage tightly. If a large scalp wound is seen then call a physician as a stitch may be necessary. Before touching any bleeding surface be sure to wash the hands as the slightest particle of dirt may cause an infection. An infection frequently results in poisoning.

When bleeding comes from any part of the

body apply styptic cotton to the bleeding surface and bandage tightly. Powdered alum sprinkled on absorbent cotton is also useful to stop bleeding.

If the finger is cut or scratched and bleeds, wash it in clean, cold water and bandage tightly with a clean bandage.

Nosebleed

Nosebleed can be stopt by inserting into the bleeding nostril a small piece of absorbent cotton soaked in tincture of iron. Small pieces of ice held against the nose will frequently stop the bleeding.

Cat or Dog Bite

In case baby is bitten by a pet cat or dog, or, as sometimes happens, by a playmate, the parts should be washed with clean water, then apply tincture of iodine directly on the wound. If the bite is more than skin deep send for the physician.

CHAPTER X

EYE, EAR AND MOUTH

EYES

At Birth

AT birth in every hospital and in private houses the physician and midwife should drop one drop of a 2 per cent. solution of nitrate of silver on the eyeball. This will prevent an infection of pus germs. This is the only safe means of preventing eye trouble.

Crusted Eyelids

If baby wakes up in the morning with a cold in the head he may find pus oozing from the eyes, and also find that the lids are glued together by this pus drying and forming crusts. These crusts can be softened and loosened from the eyelashes by soaking them in boric acid solution (a pinch of boric acid to a wineglassful of lukewarm water) applied on absorbent cotton. The lids should be bathed with this solution several times a day and after each bathing borated vaselin on cotton thoroughly applied.

"Sore Eyes"

Many babies within two or three days after birth, sometimes later, have what is commonly called "sore eyes." The eyelids become reddened and swollen, and later pus will be seen in the eyes. The child looks as tho it had "caught cold in the eyes." The proper name for this condition is ophthalmia. It is caused by a germ getting into the baby's eyes during birth. The physician's attention should be called to this at once. Neglect and carelessness may result in blindness.

Ophthalmia

EARS

When the baby has earache he will cry and scream continuously. As a rule he will put his hand to the affected side of his head, or press his head deep into the pillow. Babies suffering with earache invariably rub their gums so that they sometimes convey the impression that they are teething. In some instances the head will be thrown back and the baby will appear to have a spasm of the muscles of the neck. When the affected ear is touched, baby will usually jump and scream with pain.

A small hot-water bag should be covered and placed on the pillow and the baby allowed to rest his head on it. If this does not help the ear should be syringed with warm chamo-

mile tea or with a teacupful of warm water containing one-half teaspoonful of bicarbonate of soda. A small bag containing salt may be warmed and applied for its dry warmth behind the ear. Do not stick hairpins or other substances into the middle ear, but rather consult a physician if the symptoms do not subside after these remedies have been tried.

Running Ear

A running ear that follows influenza, measles or scarlet fever requires careful antiseptic treatment. There is always a possibility of the pus extending through into the deeper portions known as the mastoid cells.

For a simple running ear, the ear may be washed with a teacupful of warm water containing one teaspoonful of bicarbonate of soda. This should be slowly injected into the ear by means of a small glass ear syringe. Powdered alum or boric acid, one-half teaspoonful to a half pint of warm water, temperature 105° F., may be syringed into the ear night and morning.

If there is a catarrhal discharge from one or both ears lasting several weeks, which does not improve with syringing, then the throat should be examined for the presence of adenoids.

Projecting Ears

Projecting ears can be corrected by having the baby wear a thin but tight-fitting cap every night and during the day while asleep. The

younger the baby is, the easier this trouble will be corrected. At any age it will take months of constant treatment.

SPRUE—SORE MOUTH

The tender mouth of a new-born infant can easily be infected with an unclean nipple or pacifier containing disease germs. This may result in an infection of the mouth called sprue.

The yellowish or yellowish-white spots seen on the tongue, cheeks and gums are usually due to a fungus growth which spreads rapidly. While there is no danger to the child's life, it will interfere with the appetite and digestion, and should not be neglected. A local application of one drop of pure carbolic acid thoroughly mixed with one teaspoon of glycerin and one teaspoon of water, and applied with absorbent cotton, once or twice a day is sufficient to destroy these spots. If, however, they do not respond to this treatment within a reasonable time a physician should be called.

One-third of a teaspoonful of borax and honey given three times a day, or several drops of glycerin dropt into the mouth after each feeding will frequently relieve this condition.

Stagnant milk in the mouth, especially in a feverish child, can produce soreness and ulcer-

ation. A drink of water after each feeding is sufficient to cleanse the mouth and prevent the condition. In obstinate cases boric acid powder dusted into the mouth may be required. Attention to the bowels to avoid constipation is necessary in every case of sore mouth.

CHAPTER XI

BAD HABITS, ETC.

THUMB-SUCKING

THE habit of thumb-sucking is usually formed at or about the period of dentition. An irritant gum will seem to be relieved by the pressure of the finger. This habit may continue long after the child is through teething. It is met with more frequently than any other habit in early childhood, and frequently results in thickened and protruding lips. The upper jaw is sometimes forced out of shape by the pressure of the thumb back of the teeth, thus crowding the nasal passage and preventing a normal breathing process. This repeated day after day spoils the shape of a pretty mouth, and frequently the thumb and lips are blistered from the vigor of the sucking.

The habit once formed is hard to break. Very few cases will of their own accord stop the habit. Reasoning, pleading and punishment are of little avail. If the child is shamed, it will seek seclusion and indulge

in the habit at night, thus slyness and deceit will develop.

Thumb-sucking frequently leads to nail-biting. It is far more easy to prevent the habit, than to cure it once it is formed. As often as the thumb is put in the mouth, it should be gently but firmly removed, never should it be left there long enough for the habit to be formed. The application of tincture of aloes or a 2 per cent. quinine solution to the fingers will in many instances break up this habit, owing to the bitter taste. These solutions should not be applied as a punishment. The cooperation of the child should be sought, and by perseverance its self-will strengthened.

If the habit has been indulged in for months, mechanical restraint may be necessary. The Hand-I-Hold mitts,* procurable at any drug store, are convenient. They are easily applied and do not limit the freedom of the arms or fingers. They are made of aluminum, ventilated with holes, and finished with a soft sleeve to go over the baby's wrist, are light in weight and can be washed and boiled. There are four sizes to fit children from three months to seven years.

* Manufactured by R. M. Clark & Co., Boston, Mass.

NAIL-BITING

Nail-biting is usually found in nervous children and is especially noticed when these children are frightened. Correction by reasoning, scolding or spanking is seldom effectual. Place gloves on the child's hands constantly day and night as a reminder. If the habit continues in spite of the gloves, apply tincture of aloes to the nails and finger-tips night and morning.

BED-WETTING

When children over three years of age wet the bed at night a distinct reason for the same exists. In a boy a tight foreskin may cause irritation and require circumcision. In girls worms wandering from the rectum into the vagina may irritate the opening of the bladder. At times the urine is at fault and must be corrected by proper diet. Meat should be stopt. Milk, eggs and fruit may be given. The foot of the bed should be elevated and the bladder emptied the last thing before retiring. Electricity may be necessary to restore the tone if weak bladder muscles exist. Electricity should only be given by a physician.

MASTURBATION

By masturbation is meant playing with or fumbling the genital organs. This is usually done with the hand or by rubbing the thighs

together. When very young infants masturbate they rub their thighs together continuously until exhausted. They become very red in the face, and when restrained become very irritable. When older children masturbate they become very pale and anemic. they are absent-minded and shy, they frequently complain of headaches and are very irritable. This is not always a bad habit, but frequently is caused by some abnormality of the genital parts. In such cases nothing but surgical relief will effect a cure. It may be caused by an irritation due to an elongated or firmly adherent foreskin, or in girls when the skin over the clitoris is adherent. It may also be caused by the presence of worms or if the genital parts are not kept clean. Moral training is useless if any irritation exists which excites this desire, therefore as soon as this habit is noted the child should receive prompt medical aid. All children should be constantly watched to see if this habit is forming and they should never be permitted to sleep with their hands under the bedclothing.

In older children the habit is hard to detect. A consciousness that they are doing something wrong early leads even young children to get by themselves when they repeat the habit. One of the surest ways of detecting

this habit is to examine the fingers of the child after it has fallen asleep. The odor of the genital organs is strong and can easily be detected on the fingers.

Tight Foreskin

If the foreskin is tight and has a pin-point opening it may cause a series of symptoms, among them bed-wetting, irritability and insomnia. Such children usually fumble with the parts as there is constant irritation.

In some cases we can widen the foreskin with a dilator. This should only be attempted by a physician. With proper oiling every day relief is frequently given. If this stretching does not give permanent relief from the sleeplessness and the irritability then we must resort to circumcision.

Circumcision

The operation of circumcision is very simple. Many cases of nervousness, such as St. Vitus dance, can be cured by this operation. When adhesions of the foreskin form and there is a contracted prepuce, then circumcision will be demanded.

Adherent Clitoris

When girls fumble with the genitals or complain of an irritation, it is usually due to a cheese-like deposit underneath the hood or cover of the clitoris.

A simple operation, preferably with a mild anesthetic, is necessary to remove the cheesy smegma and thus remove the cause of the irritation.

CHAPTER XII

WORMS—NIGHT TERRORS

WORMS

AFTER the first year when children receive some solid food in addition to their milk diet they may be troubled with worms. The majority of children seen by me, whose mothers suspect worms, rarely, if ever, have worms. Thread-like worms resembling spool cotton can be plainly seen when examining the rectum. As a rule there is an intense itching which compels the child to scratch. Restlessness at night and loss of appetite are rarely due to worms. It is true that an occasional case may be troubled with worms, but let a physician see the child and let him administer the worm medicine rather than run the risk of giving powerful medicines which are not at all necessary.

Round worms, five or six inches long and brown in color, have been seen by me in young children. About two cases out of one hundred in which worms were suspected by the mother have really proven to be worm cases.

When tapeworm is present we usually have loss of flesh, altho the child will take a fair amount of nourishment. It is only these tapeworm cases, found in children between six and twelve years of age and requiring careful diet besides expulsive treatment, that need cause any concern. Severe bleeding from the bowel has been seen by me when an anxious mother gave a strong patent tapeworm medicine, thinking that the child had worms.

Night Terrors

Sometimes children will suddenly awaken from a sound sleep and shriek or scream; others will grasp any object within reach, and sometimes imagine that animals are in the room. Too rigid discipline or fright may provoke bad dreams and give rise to distinct hysteria. Such attacks may be provoked by intestinal worms, dyspeptic or intestinal derangement. The irritation of an elongated prepuce or a tight foreskin may cause night terrors. Masturbation in the male or female child will cause bad dreams and distinct nervous symptoms.

While many cases are due to intestinal colic and an overloaded stomach, there are cases caused by brain disease, especially those cases having bulging of the soft spot on the top of the scalp. Cases of water on the brain (hydrocephalus) frequently have night terrors. This is called hydrocephalic cry.

CHAPTER XIII

EXTERNAL APPLICATIONS, AND THE MEDICINE CHEST

Flaxseed Poultice

INTO a pint of boiling water stir flaxseed, also known as linseed, until it forms a paste just thick enough to flow from a spoon; add a tablespoonful of sweet oil or glycerin; spread it one-half inch thick between two layers of cheese-cloth; apply where directed and cover with a layer of cotton, warm flannel or oil silk. If the part to be poulticed is anointed with sweet oil or vaselin before the poultice is applied, no blisters will be raised.

Mustard Poultice

To make a mustard poultice take one teaspoonful of mustard and six teaspoonfuls of wheat-flour, add two teaspoonfuls of sweet oil or glycerin and enough warm water to make it into a thick paste. Spread between two layers of cheese-cloth, and apply to the part directed, after anointing the same with vaselin. This poultice can be left on only a few minutes and when removed the skin should again be anointed with vaselin or dusted with cornstarch.

Mustard Foot-Bath

To give a mustard foot-bath, tie one tablespoonful of German mustard into a cheese-cloth bag. Let this soak for a few minutes in a foot-tub containing two quarts of warm water, temperature 105° F. The feet should be immersed to above the ankles for about two minutes. On removing the feet, place them near a hot-water bottle or wrap them in a warmed towel.

Turpentine Stupe

A turpentine stupe is made by adding one-half teaspoonful of spirits of turpentine to one pint of boiling hot water and mixing thoroughly. Dip two thicknesses of flannel into this turpentine and water and wring out until it does not drip. Apply where directed and cover with a large piece of cotton or oil silk.

Pneumonia Jacket

A pneumonia jacket should be shaped like baby's sleeveless shirt. A layer of cotton is placed between a layer of cheese-cloth and one of oil silk. The edges are turned in and the three layers pasted together. The shoulder seams or straps may be sewed together or tied with tapes. The front is closed by means of tapes sewed on either side. The jacket is worn with the layer of cheese-cloth next to the skin. Two jackets should be made so as to have a change when one gets moist.

Hot Water Bottle

A hot-water bottle should be half-filled with hot water, the air expelled by pressing the

empty part of the bag together, and the top screwed on. The bag should then be held upside down to see if the water drips. Draw over the bottle a flannel cover or sew the bottle in a square of flannel.

Ice-Bag

An ice-bag should be half-filled with crusht ice, the air expelled and the top screwed on. If an intense cold is desired a little common salt may be added to the crusht ice. A layer of moist cheese-cloth or cotton should be laid between the bag and the skin, otherwise the extreme cold is painful. If the weight of the bag is uncomfortable to the patient, especially if applied to the head, then the bag may be wrapt in cheese-cloth and pinned to the pillow, so suspended as to barely allow it to touch the head. The bag must be refilled before all the ice has melted.

Cold Compresses

Cold compresses are made of three or four thicknesses of linen wrung out of cold water and applied where directed. Two compresses should be used, one of which is kept in the cold water while the other is on the patient.

Enema (To Wash the Bowel)

To give a simple enema, ordinary suds are made with castile or glycerin soap and warm water, temperature 100° F. A fountain syringe should be used, to which an infant's size nozzle is attached. Fill the bag with the amount of suds ordered (usually one or two pints) and anoint the nozzle with vaselin. Open the

spring clasp on the tube and allow the air and a few ounces of water to escape. Gently insert the nozzle into baby's rectum and allow the water to flow in a slow, steady stream, the bag being held about two feet over the baby's body.

Chamomile Injection

A chamomile injection is made and given in the same manner as a simple enema, only chamomile tea, temperature 100°F., made by steeping one tablespoonful of chamomile flowers in a quart of boiling water, is used instead of the soap suds.

THE MEDICINE CHEST

The baby should have his own ointments, fountain syringe, etc. These should be kept in the nursery away from disinfectants and poisonous drugs. A list of the articles should be pasted on the inside of the door of the medicine closet so that in an emergency anyone may know whether a certain looked-for article can be found.

Whether or not the closet contains poisons such as paregoric, the door should always be kept locked, for an overdose of many drugs, whether poisonous or not, should be avoided.

The key should be kept out of the children's reach, in a safe but accessible place known to all the adults.

When the baby travels or when going to

the country, a full and fresh supply of all drugs and requisites he is likely to need should be taken along. The following list should be supplied and will meet almost all emergencies:

Castor oil
Glycerin suppositories
Aromatic sirup of rhubarb
Calcined magnesia
Essence of peppermint
Sweet spirits of niter
Sirup of ipecac
German mustard (ground)
Chamomile flowers (German)
Alcohol
Witch-hazel
Glycerin
Glycerin soap
Vasclin
Zinc salve
Bicarbonate of soda
Boric acid powder
Pure talcum powder
Eyestone or flaxseed
Absorbent cotton
Cheese-cloth
Gauze and muslin bandage
Linseed oil and lime water
Tincture of iodine
Thermometer
Medicine dropper
Medicine glass
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